MacWEEK

04.15.96 *The Newsweekly for Macintosh Managers* VOLUME 10 NUMBER 15

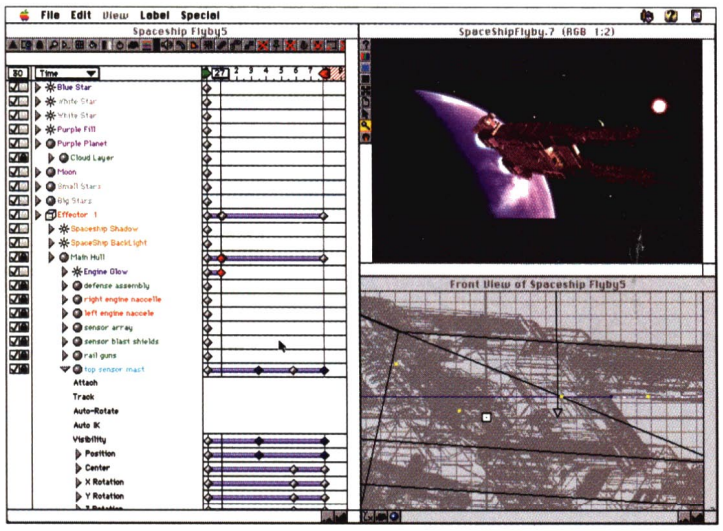


Image make-over: The new Broadcast version of Electric Image's animation software will cost less than half the price of its high-end system.

Broadcast show bets on Mac's future role

By Kelly Ryer

Las Vegas may be known as Sin City, but this week's National Association of Broadcasters show there will seem more like a prayer meeting. For Mac users, there will be no shortage of revelations.

Electric Image Inc. will release its $2,495 ElectricImage Broadcast. Slated to ship this quarter, the software will offer the same capabilities as the company's $7,495 ElectricImage Animation System (EIAS), with one exception: its maximum resolution will be only 768 by 576 pixels. The company will simultaneously re-

See NAB, Page 82

Dual booting: Copland, 7.5 to share Mac

By David Morgenstern

Users raved as Apple took Copland on the road last week to demonstrate new and previously announced features.

Peter Lowe, one of four Apple product managers for the operating system, showed off Copland interface features to the crowd at MacFest '96, hosted by BMUG Inc. in its hometown of Berkeley, Calif. He said the final release was about "nine months away" and would probably cost the same as System 7.5, about $90.

Lowe revealed that users will have a "transition phase" from System 7.5. Copland will support a dual-start-up capability that will let users switch back and forth between new and old OSes.

Much of Lowe's presentation focused on Copland's expanded user interface, especially the multi-user preference capability called workspaces. He said Copland will probably allow different workspace appearances and security settings for up to 10 users per machine.

After running an Appearance

See Copland, Page 82

Spyglass eyes OpenDoc parts

Enhanced Mosaic objects due in June

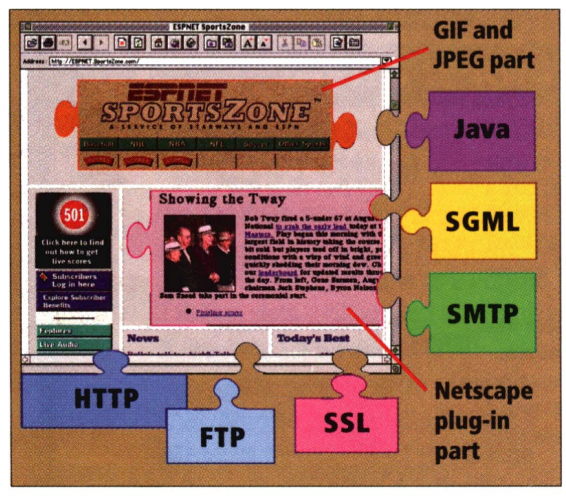
By Rebecca Gulick and James Staten

OpenDoc will get a needed boost this week when Spyglass Inc. announces that it will break its Enhanced Mosaic Web client into a cluster of parts.

Due in June, the Spyglass Web Technology Kit on the Mac will comprise an HTML container and related parts for displaying images, playing sounds, and working with Java applets or Netscape Navigator plug-ins. Spyglass will provide OpenDoc parts for most Internet protocols and security schemes, the company said.

Although similar in concept to Cyberdog, Apple's OpenDoc-based Internet suite, the Mosaic kit will include more than twice the parts that Apple provides.

See Spyglass, Page 84



Enhanced Mosaic licensees, such as Microsoft and Oracle, will be able to pick and choose the OpenDoc parts they wish to provide in their browsers.

Apple VB tool slips to 1997

Denali denied WWDC debut

By Clifford Colby

Apple has reportedly pushed back the release of its Visual Basic competitor to early 1997. The initial release of the programming environment, code-named Denali, had been expected at the Apple Worldwide Developers Conference in San Jose, Calif., in May.

"Denali is progressing," said a source familiar with Apple's efforts. "It will be later than the company hoped, but at WWDC Apple plans to demonstrate Denali with a Visual Basic 3.0 kind of functionality."

At last year's developers conference, Apple and IBM Corp. announced they were working together on a set of cross-platform development tools. Apple said its effort, Denali, would be available for the Mac "in some form" by this year's WWDC (see 05.15.95, Page 1).

See Denali, Page 82

Quarterdeck plots course for 3 WebStar upgrades

By James Staten

Quarterdeck Corp. last week shipped the first in a series of WebStar upgrades that it hopes will move the Mac-based Web server past its Unix competitors in performance and capability during 1996.

WebStar 1.2.5, a free update, is Open Transport-native, which Quarterdeck said improves performance by 40 percent and boosts the number of simultaneous connections from 50 to 150 — equal to most Unix servers.

Simon Higgs, president of Higgs America, a Los Angeles-based Web-design and site-management company, said the new version was three to five times faster than Version 1.2.4 in LAN tests. However, Higgs said he will not deploy the new version on his servers because many CGI (Common Gateway Interface) tools, used to serve interactive forms and connect to databases, do not yet support Open Transport.

CGI performance will improve

See WebStar, Page 84

IBM, Mac OS deal is all about chips

By Stephen Howard

In a now-familiar refrain, sources at IBM Corp. said last week their company is close to signing a deal with Apple to license the Mac OS. But observers said the agreement is a tepid endorsement of the Mac and the PowerPC Platform.

While IBM of Armonk, N.Y., has repeatedly stated that it will license the Mac OS, industry analysts said they expected the deal will be cut with Big Blue's Personal Computer Co., which makes Intel-standard PC systems. The license in the works now, however, is reportedly with IBM's Microelec-

See IBM, Page 84

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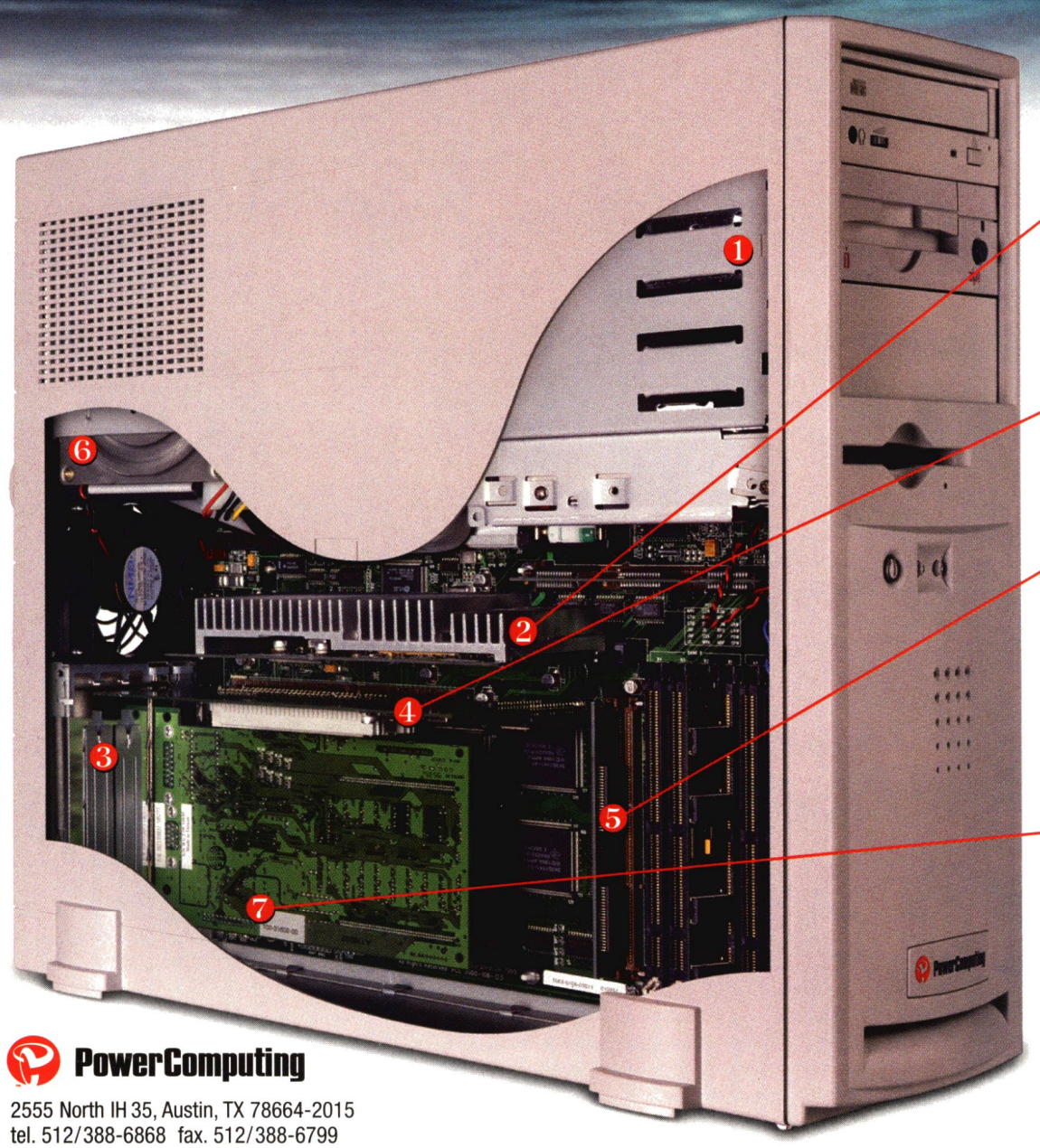

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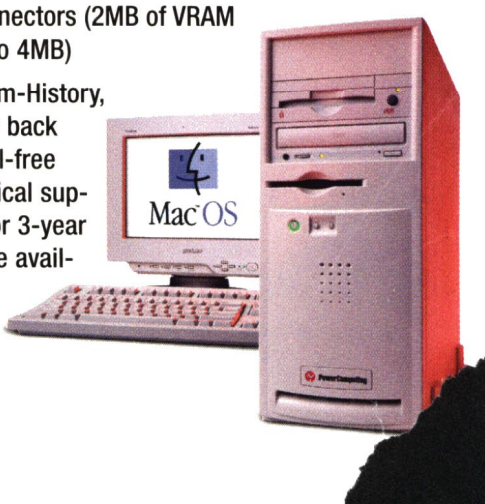

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04.15.96 VOLUME 10 NUMBER 15

4 UP FRONT

QuickCam shoots for color conferencing • Apple readies education models, PC boards • Future of Apple's Fountain plant • Moving Worlds gets thumbs up as next VRML

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Now intros Web Publisher for PIMs • Ricoh ships RDC-1 camera • PaperPort Vx goes SCSI • Dramatica Pro 2.0 takes stage • MacOpener 2.0 opens Windows to Mac

12 GA

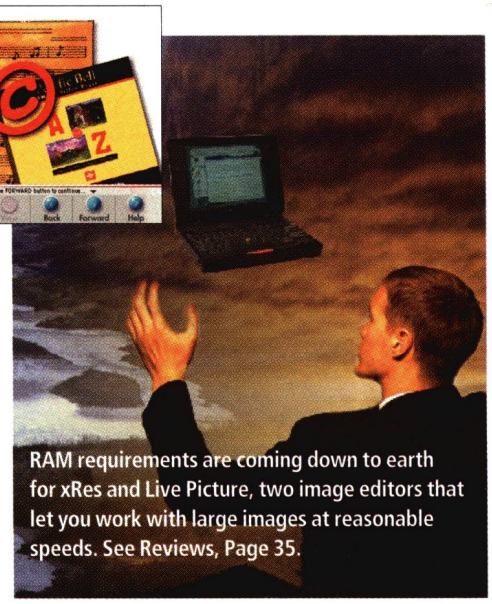
Authorware makes inroads to Web • Strata buys Avid VideoShop • Seiko preps split-personality printers • Web font wars • GA Extra: Midrange flatbed scanner market is hot

24 GATEWAYS

RunShare on OT speeds file transfers to 100 MB per minute • NCSA releases new Web browser • Abbott Systems hogs the Internet remote • New remote-access options abound

Small businesses have taken big steps to increase e-mail capabilities by integrating with the Internet. See Solutions, Page 47.

Multimedia authors can create Internet-based presentations with Shockwave and Authorware 3.5. See GA, Page 12.



RAM requirements are coming down to earth for xRes and Live Picture, two image editors that let you work with large images at reasonable speeds. See Reviews, Page 35.

35 REVIEWS

Insignia starts up Mac users with SoftWindows 95 • Comparison: xRes 2.0 gets serious, Live Picture 2.5 gets polish • Reviews Forum • In Brief: WebArranger 2.0, VirusScan 1.0

47 SOLUTIONS

Tired of continually paying licenses fees for e-mail programs, small businesses are integrating the Internet with LAN systems.

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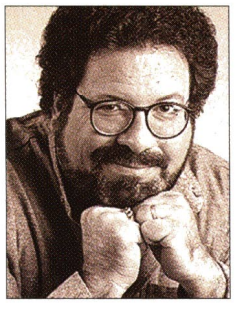
MACWEEK INSIDER DAVID MORGENSTERN

Missed opportunities

In this election year, many right-wing politicos are calling for even more government downsizing. They want to shift almost everything — welfare, police, schools — from the public sector to private businesses.

This political movement is mirrored at Apple these days with the constant refrain of "third-party opportunities." This phrase refers to the practice of moving software and hardware development as well as production off campus; the work is handed over to outside developers.

We've seen these plans carried out via licensing hardware and software, outsourcing manufacturing, and farming out development for multiprocessing and a NuBus-to-PCI bridge. Just like any other large '90s company, Apple also carries a corps of temporary employees and contractors.



This strategy can be a winner for Apple. By building partnerships for the Mac market, Apple doesn't spread itself too thin. And the bottom line is propped up out of the cellar.

But we're also seeing this "opportunity" frequently used as an excuse for serious gaps in Mac technology. Apple recently missed the boat with key products that could take advantage of market openings and make the Mac stand out from the crowded field of Intel-standard PC players. It is so late in execution that developers are forced to pick up the ball and try to run with it.

Case in point: Apple's Internet strategy has not helped put Point-to-Point Protocol (PPP) in the Mac OS. It's still missing from this week's list of Internet utility updates (see story, Page 82).

Apple reportedly has been working on support for PPP for years, with nothing reaching even backstage, let alone getting ready for performance. PPP is still out of the picture for Apple Remote Access and even Open Transport.

The slack has been picked up by Hyde Park Software Inc. of Austin, Texas, with its MacSLIP product. Steve Dagley has also led the way with a freeware control panel, FreePPP. Hey, it's an opportunity for them, right?

Another example of missed opportunity will be found at the National Association of Broadcasters conference and expo in Las Vegas this week. Apple will reportedly show its 1394 PCI card in public; 1394 is the official IEEE moniker for FireWire.

While vendors will demonstrate prototype Digital Video Disc players, digital VCRs and high-performance camcorders with 1394 interfaces, Macs around the show floor will not be able to connect to them. Apple will not be able to point to popular Mac digital video applications or third-party Mac-based video workstations running FireWire.

NAB vendors will demonstrate DVD, but Macs will not connect.

Sources said the card won't be ready for prime time until late in the year, primarily because Apple is still creating an API for it. Here's a technology that found its genesis years ago at Apple, has gone through the lengthy industry-standards process, uses its excellent Descriptor Based direct memory access, and has made its way to both consumer and professional products. But where's the Mac card and software that will make it go in the digital video market? Still in the kitchen.

Speaking of PCI, Apple's DOS compatibility cards for PCI Macs are slated for release this month (see story, Page 4). PCI Macs have been available almost a year; these cards were a logical add-on. But again, Apple was slow to market. It has not only missed the boat for sales to PCI Mac users but also stalled the market for third-party developers by dangling this product for months, when another company could have delivered it sooner.

With the megamillion-dollar accounting due from the corporate bean counters soon, the impetus to belt-tighten within Apple will increase. Managers will look for third parties to lighten the load instead of share the burden.

The medieval rabbi Bahya ben Joseph said, "Caution should not be overcautious." Apple should take measure of its strategies, but for critical technologies, it needs to go for broke. □

David Morgenstern is MacWEEK news editor. He invites feedback at david_morgenstern@zd.com.

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QuickCam now in 24-bit color

Video camera from Connectix due this week

By Matthew Rothenberg

Connectix Corp. this week will deliver a 24-bit-color version of its popular, low-cost spherical video camera.

The Color QuickCam uses a single 640-by-480-pixel CCD (charge-coupled device) array and a proprietary compression scheme to capture 160-by-120-pixel video sequences at more than 24 frames per second and 320-by-240-pixel sequences at up to 15 fps.

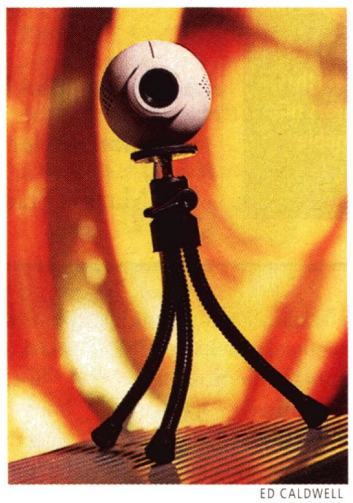
Like its four-bit gray-scale predecessor, the Color QuickCam connects to the Mac via the serial port. It now also draws power from the Mac's ADB port.

Connectix's VIDEC (video digitally enhanced compression) technology can compress the video data at a 4-1 ratio. It captures still images in PICT, TIFF and JPEG formats.

The device includes a 1.6-aperture lens with a manual focus of 1 inch to infinity, Connectix said. The bundled software includes a self timer; automatic controls for room lighting; and controls for saturation as well as white, black, red and blue levels.

The Color QuickCam will be available for a street price of about $229. Users who purchase the device through July will be eligible for a $30 rebate, Connectix said.

Connectix Corp. of San Mateo, Calif., can be reached at (415) 571-5100 or (800) 950-5880; fax (415) 571-5195; info@connectix.com; http://www.connectix.com. □



ED CALDWELL

Eye on color video: Connectix's Color QuickCam can be outfitted with a flexible $14.95 tripod.

New education Macs roll out

Apple also preps PCI DOS boards

By Joanna Pearlstein

Apple's April offerings include two new Power Macs for education and the company's first DOS PCI cards.

Set to be unveiled this week, the Power Mac 5400/120 and Power Mac 5260/100 are Apple's first education-only Macs that lack the LC moniker. The 5400 is also Apple's first PCI Mac aimed at schools. The 120-MHz PowerPC 603e-based 5400 model with 16 Mbytes of RAM, a 1.6-Gbyte hard drive, a CD-ROM drive and bundled Apple Presentation System costs $2,299. It includes a new PCI-based communications slot and 10BASE T Ethernet card.

The 5260 sports a 100-MHz PowerPC 603e but includes a processor direct slot instead of PCI. A base 5260 with 16 Mbytes of RAM, an 800-Mbyte hard drive and a CD-ROM drive costs $1,699. Level 2 caches are optional on both models.

Both the 5400 and 5260 include a monitor and speakers. The 5400 contains a 15-inch monitor with a 12.8-inch viewing area, and the 5260 boasts a 14-inch monitor with a 12.5-inch viewing area. Apple said the 5260 replaces the LC 5200, and the 5400 replaces the LC 5300.

In addition to the new education systems, consumer versions of the 5400 and its modular sibling, the 6400, will be released this summer, sources said.

In other news, Apple later this month will roll out the PC Compatibility Cards, the company's first PCI-based DOS cards. One model will use a 100-MHz 5x86 processor from Cyrix Corp. and one will use a 100-MHz Pentium chip from Intel Corp., according to sources. The cards will reportedly cost about $800 and $1,100, respectively.

The 5x86 card will measure 7 inches long and pack a 128-Kbyte Level 2 cache; the Pentium card will be 12 inches long and include a 256-Kbyte Level 2 cache.

The Power Mac 5260/100, a 100-MHz all-in-one Mac with a built-in 14-inch monitor, will be sold only to the education market.

The DOS cards will reportedly arrive alongside several "speed-bumped" Macs (see 03.11.96, Page 1). These Macs will include a 120-MHz-based Power Mac 7200; a 132- and 150-MHz, 604-based Power Mac 8500; and a 150-MHz, 604-based Power Mac 9500.

Apple declined to comment on unannounced products. □

Clones in Fountain factory's future

By Matthew Rothenberg

The purchaser of Apple's Fountain, Colo., manufacturing plant sees a future role for the factory in the Mac clone market. Meanwhile, current employees are concerned about the upcoming switch to a new owner.

Gene Sapp, president and chief operating officer of Huntsville, Ala.-based SCI Systems Inc., said Mac OS licensees are likely future customers of the facility. The factory currently manufactures most PowerBook models and some desktop Macs.

"I would think that within a year we would have some other business in there," Sapp said. The plant builds Macs, and "that core business would logically include licensees," he said.

SCI has built Mac clones for Power Computing Corp. at other locations. Mike Rosenfelt, Power director of marketing, said, "It's absolutely possible that SCI will manufacture for Power at Fountain."

Apple employees at the Fountain plant said they await the sale to SCI with trepidation. The consensus is that some jobs would be eliminated.

"We believe we will be downsized," said one staffer who requested anonymity.

"There's a lot of disappointment that we won't be working for Apple anymore," another employee said.

Most of the facility's 1,100 workers will be rehired, but last week employees were told that some would get an Apple layoff package.

Employees whose jobs change may be offered a lower salary, and those who do not accept a lower-paying job will not receive a layoff package, according to sources.

"We're going from a touchy-feely attitude to a callous, cut-throat attitude, and it's unacceptable," a third employee said.

SCI's Sapp predicted that the transfer of 1,100 employees off Apple's payroll will not affect the company's $175 million restructuring charge for this quarter, since the Fountain sale will not be completed until June. □

Moving Worlds will set standard for VRML 2.0

By James Staten

It's official: The Moving Worlds VRML specification has been chosen by the Internet community as VRML 2.0.

The VRML Architecture Group (VAG) last week announced that the open polling process ended and the Moving Worlds proposal was the winner. As a result, VRML, or Virtual Reality Modeling Language, 2.0 is now in "a final spec development" period, and developers can begin building 3-D Internet applications based on it.

Moving Worlds, fostered by Silicon Graphics Inc. and Netscape Communications Corp., both of Mountain View, Calif., adds motion to static 3-D worlds on the Internet. VRML 2.0 scenes and objects will contain behaviors, animation sensors and sounds.

A modified version of Apple's 3DMF (3-D metafile format) was chosen as the binary file format for the specification. John Alfano, Apple 3-D program manager, said his team is making the necessary changes to the file format and that the revised format will be separate from the current 3DMF.

"We did a Command-D on 3DMF and are making some modifications," Alfano said. He added that once the format is completed, it will be renamed VRML 2.0 to reduce confusion within the industry.

Microsoft Corp.'s ActiveVRML technology was the loser in the VAG voting process. "It's unfair to present this as a war between ActiveVRML and Moving Worlds," said Paul Osbourne, director of multimedia for the Internet platforms and tools division at Redmond, Wash.-based Microsoft. "We sit on the VAG and proposed ActiveVRML to fill a need in VRML 2.0.

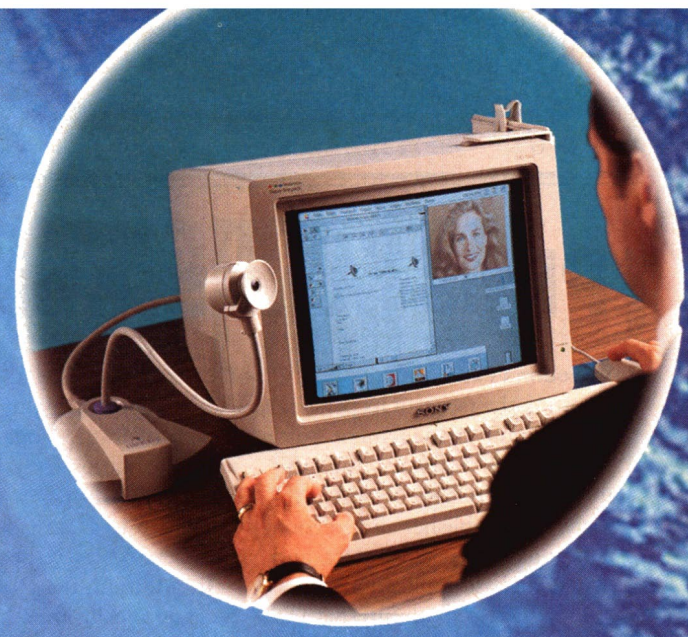
"ActiveVRML is for Internet development but is not limited to walk-through worlds," Osbourne said. "If a lot of people start building for [VRML 2.0], we'll support it."

Osbourne said no date has been set for the Macintosh version of ActiveVRML. □

INTRODUCING

FlexCam VC

Color Video Camera



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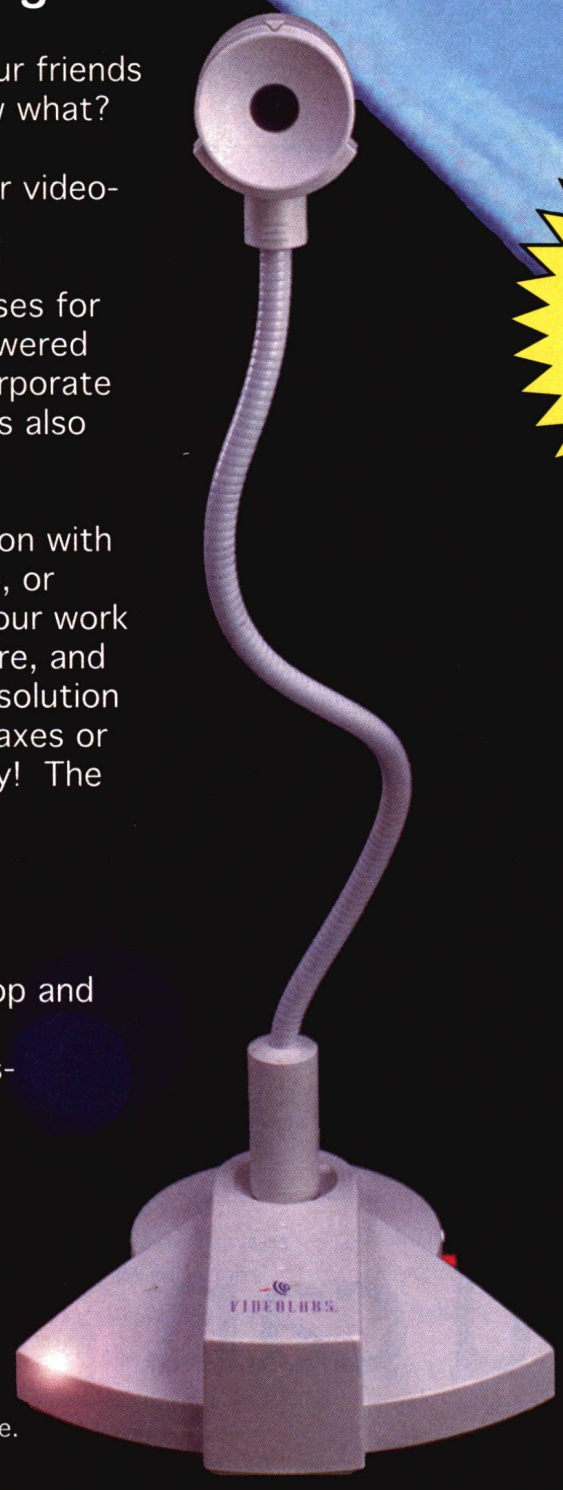

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PIMs now mobile

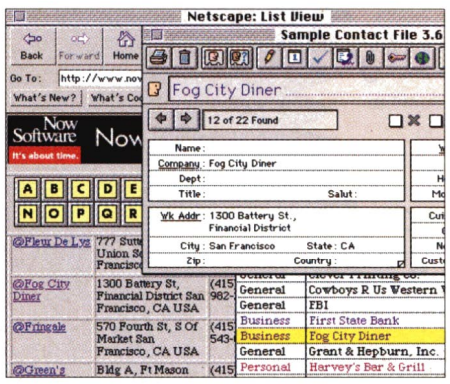
By Joanna Pearlstein

Boosting the range of its personal information management software, Now Software Inc. this month will release Now Up-to-Date Web Publisher and Version 3.6 updates to its contact and event database applications.

Designed for both Internet and internal networks, Web Publisher can be used to serve calendars and address books on the Web (see 03.11.96, Page 1). The $299 software will also come with Now's pair of PIM applications.

Netscape Navigator users will be able to drag calendar and contact information from Web Publisher HTML pages into their Now Up-to-Date 3.6 or Now Contact 3.6 files, respectively.

In addition, the PIM updates will add synchronization for mobile users and QuickAccess, a small application that gives users an easy way to find key contacts and schedules without opening either parent program. Both new versions will support TCP/IP networks; Up-to-Date 3.6 is also Power Mac-native.



With Now Up-to-Date Web Publisher, users will be able to drag contact and calendar information from Web pages into their own PIMs.

Upgrades for Up-to-Date and Contact will cost $29.95. Packaged together, the programs have a street price of $69.95, Now said.

Now Software Inc. of Portland, Ore., is at (503) 274-2800 or (800) 689-9427; fax (503) 274-0670; info@nowsoft.com; http://www.nowsoft.com. □

Ricoh camera does stills, video, sound

By Matthew Rothenberg

Ricoh Corp.'s Consumer Products Group this month shipped a multifunction digital camera that captures still images, video and sound.

The $1,699 RDC-1 measures 5.25 by 2.75 by 0.75 inches. The 9-ounce camera includes a CCD (charge-coupled device) array that can capture 24-bit-color still images at a maximum resolution of 768 by 576 pixels.

The RDC-1 stores images on Type I PC Cards in capacities of 2, 4 and 24 Mbytes; the 24-Mbyte card can hold up to 492 JPEG images at a 60-1 compression ratio. A serial adapter is available for $59.

In addition, the RDC-1 can capture up to five seconds of NTSC video at a rate of 30 frames per second, or record up to 1 hour, 40 minutes of 16-bit, 8-kHz sound, Ricoh said.

According to Ricoh, the camera features a mechanical shutter, which Ricoh said offers higher image quality than competing models. The RDC-1 includes a 10-second self timer, flash and an autofocus zoom lens with a range of 16 inches to infinity.

A $539 2.5-inch LCD lets users view still images or video sequences as they are captured.

The camera ships with Mac and Windows drivers and a remote control. It runs on three rechargeable NiCad batteries; an AC adapter-charger kit costs $219.

Ricoh Corp.'s Consumer Products Group of Sparks, Nev., can be reached at (702) 352-1600 or (800) 225-1899; fax (800) 544-8246. □

PaperPort Vx gains SCSI

By David Morgenstern

Picking up the pace for desktop scanning, Visioneer Inc. last week released a SCSI adapter for its PaperPort Vx scanner.

The $69.95 external unit connects to the $369 Vx's AnyPort, a proprietary port that supports serial and Fast SCSI-2 connections. The adapter is also compatible with Hewlett-Packard Co.'s $349 ScanJet 4s desktop scanner.

Visioneer said users will see improved performance primarily with high-resolution scans; it will boost data transfer rates from two to six times, depending on the resolution mode and Mac model.

In addition to a speed boost, the SCSI pod clears up an inconvenience with the original serial design: Systems with a modem and printer required users to plug and unplug the scanner between uses or purchase a serial port switch box (see 11.27.95, Page 51).

Visioneer Inc. of Palo Alto, Calif., is at (415) 812-6400 or (800) 787-7007; fax (415) 855-9750; http://www.visioneer.com. □

For the record

The 04.01.96 story on Fibre Channel and SSA cards (Page 4) incorrectly identified the developer of the ImMIX system. It is from Scitex Digital Video Inc. of Redwood City, Calif.

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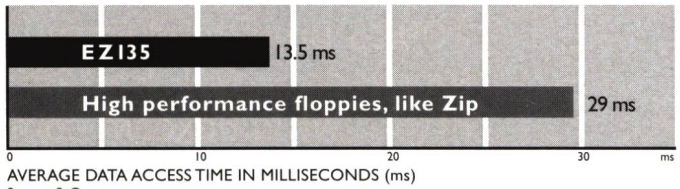

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Dramatica, the sequel

By Joanna Pearlstein

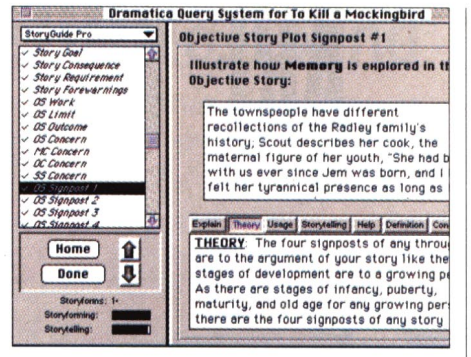
Screenplay Systems Inc. recently took center stage with an update to Dramatica Pro, its story authoring software. Version 2.0 of the $399 software features an updated story theory that is less academically slanted than the previous version, Screenplay said.

"The new version is a much more useful product," said user Mike Backes, a Los Angeles-based screenwriter. "The nice thing about Dramatica is it allows you to lay out in a logical fashion the conflicts between characters, which is an essential point of writing."

Displaying a scrolling list of dramatic elements, the revamped StoryPoints window provides easier editing and navigation. Dramatica Pro also helps to uncover inconsistent characters. A new on-line workbook guides users through the story-writing process.

"They've made some interface improvements and have made it run more quickly," Backes said.

Version 2.0 comes with 36 sample stories, including several for well-known films.



Dramatica Pro 2.0 gives users a view of dramatic points and easy access to editing fields.

The update costs $49.95; an update with a book describing the theory behind Dramatica is $99.95. Until the end of April, Dramatica Pro 2.0 will cost $299.95.

Screenplay Systems Inc. of Burbank, Calif., can be reached at (818) 843-6557; fax (818) 843-8364; dramatica@screenplay.com; http://www.well.com/user/dramatic. □

Signal plugs users into tech images

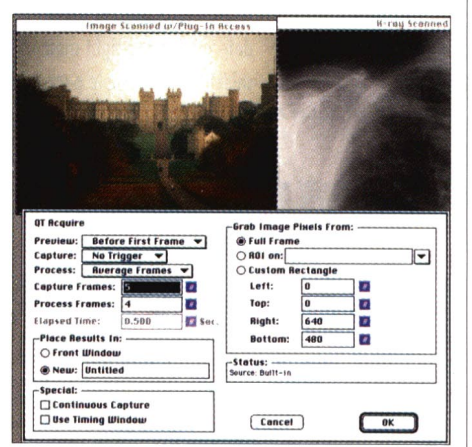
Signal Analytics Corp. next week will release new add-ons for its scientific-imaging analysis software that will provide support for Adobe Photoshop plug-ins, Power Mac video and a pair of automated microscopes.

Plug-in Access, an extension to the company's $1,400 IPLab Spectrum software, will let users run most Photoshop plug-ins and acquire images from several 16-bit scanners, including models from Agfa, a division of Bayer Corp., and Vidar Systems Corp. The extension is free to current users, Signal said.

The new $425 Spectrum QT Capture module adds support for QuickTime image capturing via the built-in video ports in the Power Mac 7500 and 8500. It can also handle images from many third-party frame-grabber PCI boards, Signal said.

In addition, IPLab Spectrum now controls the z-axis motor on several Leica AG automated microscopes. The $750 Leica-Mover module lets users perform 3-D analysis and optical sectioning, the company said.

Signal Analytics Corp. of Vienna, Va., can be reached at (703) 281-3277; fax (703) 281-2509; info@iplab.com. □



The new Spectrum QT Capture module lets IPLab Spectrum users grab digital video images on the Power Mac 7500 and 8500.

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PRINTER BEAT

Faster directions. Hewlett-Packard Co. of Palo Alto, Calif., in June will uncrate its JetDirect EX Plus3-100, a 100VG-AnyLAN, Ethernet and token-ring print server.

The $649 server will let users connect up to three printers via bidirectional parallel ports; it will sport a data transfer rate of 230 Kbytes per second, HP said.

The server switches automatically among network protocols and will reset automatically after a network failure. Phone (800) 533-1333; fax-back (208) 344-4809 or (800) 333-1917; http://www.hp.com/go/network_city.

TI corrals multipart output. Texas Instruments Inc. of Temple, Texas, recently shipped Mac versions of its Omni 800 line of impact printers for forms.

The $2,859 Omni 800 Model 8930/MacAdapter supports up to nine-part forms and seven-color ribbons; it offers a friction-fed paper path for cut sheets. The $2,649 monochrome Model 8920/MacAdapter outputs continuous-feed paper only. The printers' external LocalTalk-to-parallel converter is $325.

Both models offer print speeds of 100 to 480 characters per second; they come with QuickDraw and QuickDraw GX drivers. Phone (817) 771-5856 or (800) 848-3927; fax (817) 774-6660; http://www.ti.com.

Remake my day. General Ribbon Corp. of Chatsworth, Calif., this month unveiled its LZ116, a remanufactured toner cartridge for laser printers based on the Canon BX-2 engine.

The $149.95 cartridge comes with a new drum and toner, GRC said. The BX-2 engine is incorporated into several printers, including Hewlett-Packard Co.'s LaserJet 4MV. Phone (818) 709-1234 or (800) 423-5400; fax (818) 700-1209; csupp@printgrc.com; http://www.printgrc.com.

— By David Morgenstern

MacOpener gets update

DataViz Inc. this month will update its MacOpener for Windows file-exchange utility.

Version 2.0 of the $75 program will come with a new driver that lets users of Windows 3.1, Windows 95 and Windows NT systems access Mac files via the desktop, Windows Explorer or an application.

The original version required the standalone MacOpener application, which will be renamed File Navigator in Version 2.0. It will work with floppies, removable cartridges and SCSI hard drives as well as Hierarchical File System CD-ROMs.

The new version will beef up mapping between Mac files and Windows name extensions, DataViz said. It will ignore creator data for common graphics files such as JPEG and GIF. Users will also be able to set different mappings, depending on the direction of the file transfer.

Users of Version 1.0 will be able to upgrade for $29.95.

DataViz Inc. of Trumbull, Conn., is at (203) 268-0030 or (800) 733-0030; fax (203) 268-4345; http://www.dataviz.com. □

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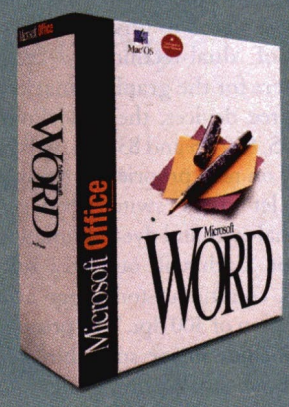

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The first product in Screen USA's EarthWatch line of dry imagesetters is the Mojave 1070, the new name of its TE-R1070.

Authorware hits Net

Version 3.5 due at broadcast show

Let the Internet do the walking: Authorware 3.5's support for Shockwave lets multimedia producers play interactive presentations over the Web.

By Rebecca Gulick

Macromedia Inc. this week will revise Authorware with a major upgrade that puts the multimedia authoring software on Power Macs and the Web.

Besides native RISC code, Authorware 3.5 features support for Shockwave, Macromedia's Netscape Navigator plug-in technology for playing animations over the Web. The new version is slated to ship at the National Association of Broadcasters show in Las Vegas.

Version 3.5 supports Macromedia's Open Architecture, enabling Authorware to use Macromedia Director's Transition Xtras plug-ins. According to the company, the new version running on a Power Mac is as much as three times faster than Version 3.0 on a 680x0-based model.

Like previous versions of the software, Authorware 3.5 lets multimedia authors create links among text, digital video, graphics, animations, sounds and other elements (see 02.06.95, Page 16).

With the Shockwave capabilities in Version 3.5, authors can compress and stream multimedia elements assembled in Authorware. Shockwave runs in the background, so presentations can be played back immediately and seamlessly from a Web page.

Authorware applications can be compressed by more than 50 percent by the Shockwave for Authorware Afterburner utility.

Macromedia said Shockwave for Authorware can be used for delivering interactive, multimedia training on demand or offering on-line customer service and technical support systems.

Authorware 3.5 is available immediately for both Windows and Macs; Mac-based Authorware users, which account for 40 percent of the program's users, will not have to wait for the Shockwave update the way Mac-based Director users did in February (see 02.26.96, Page 10).

The program is being sold only in Authorware Interactive Studio, a bundle including Director 5.0, Extreme 3D, xRes 2.0, SoundEdit 16 and Deck II 2.5, is priced at $4,995. Upgrades are $595 each.

A pre-release version of the Shockwave for Authorware Navigator 2.0 plug-in is available at http://www.macromedia.com.

Macromedia Inc. of San Francisco can be reached at (415) 252-2000 or (800) 288-4797; fax (415) 626-0554. □

Avid sells VideoShop; Strata plots upgrade

By Kelly Ryer

The National Association of Broadcasters show in Las Vegas has always been a busy time for Avid Technology Inc. But at this week's convention, the action on the sidelines may rival the company's product announcements.

Avid of Tewksbury, Mass., and Strata Inc. of St. George, Utah, will announce Strata's acquisition of VideoShop, Avid's video-editing package. Meanwhile, Avid's legal wrangling with rival Data Translation Inc. is taking a new turn.

Moving away from its 3-D roots, Strata said it plans to revise VideoShop within 90 days. Renamed Strata VideoShop, the new version will cost $395, the same as its predecessor. According to Strata, it will feature a redesigned interface, which will resemble other Strata products, and will ship with a new manual.

Strata said it is planning a competitive upgrade that will pit VideoShop head-to-head with Adobe Premiere. Users of Adobe Systems Inc.'s QuickTime editor will be able to order VideoShop for $99, Strata said.

VideoShop, which was last updated in August 1994, has been bundled with several consumer-level Macs. According to Strata, the software has more than 550,000 users.

D.J. Long, Avid director of business development, said VideoShop's sale reflects his com-

See Avid, Page 14

Seiko taps dual-media output

By Matthew Rothenberg

Seiko Instruments USA Inc. this week is slated to unveil its latest line of dual-technology color printers for the graphics market.

Three devices, the ColorPoint 820 PS, 830 PS and 835 PS, will be based on new proprietary engines that let users switch between thermal-wax and dye-sublimation output. Each will output a full-bleed, continuous-tone page at a resolution of 300 dpi. The printers will include image-smoothing algorithms; small-print heads and double-stepped motors will also enhance image quality, Seiko said.

The ColorPoint 835 PS will ship in May for $16,499. The $14,999 ColorPoint 830 PS and $7,999 ColorPoint 820 PS will be available in June, according to Seiko.

The 835 PS will output full-bleed tabloid-size pages on oversize paper with crop and registration marks as well as color bars; it will ship with 28 Mbytes of RAM and a multiprotocol Ethernet interface.

The ColorPoint 830 PS will print on sheets up to tabloid size; it will come standard with 16 Mbytes of memory. The ColorPoint 820 PS will output letter-size pages and ship with 12 Mbytes of RAM. Both will offer AutoTrim, Seiko's automatic page-finishing feature.

See Seiko, Page 14

FOCUS ON PUBLISHING

Vendors vie for Web font standard

By Rebecca Gulick

Web page designers thwarted by limited options for on-line type design may soon get some relief from their font frustrations. Several companies are competing to get their solutions accepted as Internet standards.

The players in this font race are Bitstream Inc., which said it will announce its new on-line font strategy in the next two weeks; Adobe Systems Inc. with partners Netscape Communications Corp. and Apple; and Microsoft Corp.

Currently, Web designers have very little control over the fonts in which their pages are viewed. To add a specific typeface, text must be converted into a bit-mapped graphics file, which takes longer to download and isn't as easy to update as regular text. Users can't resize bit-mapped files, and search engines cannot read them.

The emerging on-line font technologies are based on the idea of embedding fonts within a Web document. The challenge for the factions in

See Focus On, Page 14

Web fonts: Short-term solutions

All three contenders in the on-line font race have laid out interim strategies. They also have long-range plans for an open HTML standard for embedding fonts in Web pages.

VENDOR	WEB AUTHOR	USER
Adobe	Embeds TrueType and Type 1 fonts into Acrobat documents	Views fonts using Amber plug-in
Bitstream	Embeds TrueType and Type 1 fonts into HTML pages	Views fonts using an Envoy plug-in
Microsoft	Specifies TrueType fonts through an HTML tag	Views fonts without plug-in

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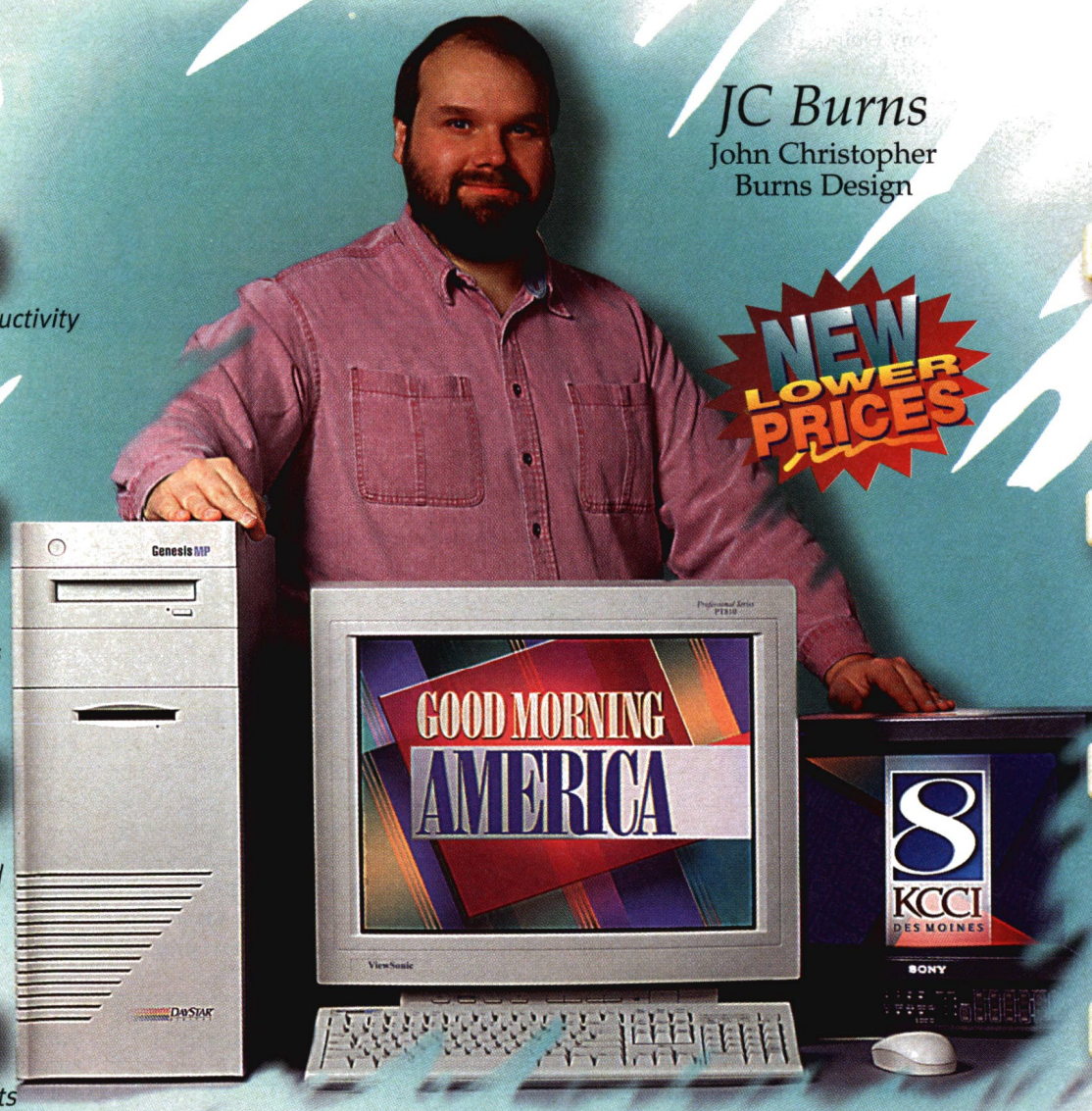

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Avid

From Page 12

pany's renewed focus on the high end. "Historically, that's where our competence has always emerged," he said. "Our objective is improvement in financial performance. With our recent restructuring, we decided that VideoShop was better suited if it went to a third party."

Meanwhile, Data Translation of Marlboro, Mass., last week announced a counterclaim to a lawsuit Avid filed last June. Data Translation claims that Avid's use of the ABVB (Avid Broadcast Video Board) in Media Composer systems infringes on Data Translation's bus-interface and real-time data-handling patent, said Tony Dolph, Data Translation director of marketing.

Avid's original lawsuit against Data Translation accused the company of violating an Avid media-pipeline patent. Avid General Counsel Frederic Hammond said: "In my opinion, [the counterclaim is] without merit. We don't think their patents are valid, for that matter." □

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Seiko

From Page 12

According to the company, the cost of materials for a letter-size thermal-wax or dye-sublimation page from one of its new printers is about 50 cents or $4, respectively. A tabloid-size sheet will be about 90 cents or $7, respectively.

The printers will run Adobe PostScript Level 2 and come with 39 Type 1 fonts. Each will feature a 33-MHz Intel i960CF RISC processor and accommodate up to 136 Mbytes of RAM.

All three ColorPoint models will ship with LocalTalk, RS-232 serial and Centronics parallel interfaces as well as a SCSI port for a 256-Mbyte hard drive. A multiprotocol Ethernet interface for the 830 or 820 model is $700.

The ColorPoint devices will come with the latest version of Seiko's MatchPoint color-management software. The company will also offer the printers bundled with the Colortron II color-matching system from Light Source Computer Images Inc. of Larkspur, Calif., for an additional $1,295.

Seiko Instruments USA Inc. of San Jose, Calif., can be reached at (408) 922-5900 or (800) 888-0817; fax (408) 922-5835. □

FOCUS ON

From Page 12

this cyberfont war is to deliver high-quality, anti-aliased fonts quickly and securely via the Internet.

All three groups plan to create open HTML specifications and promote their technologies as the industry standard. However, none of the contenders has yet provided a completely open solution.

Old software, new use

Bitstream of Cambridge, Mass., and Adobe of Mountain View, Calif., have built their strategies on existing portable-document software. Bitstream is seeking a role as an OEM source for TrueDoc, its on-line font-imaging technology. The company said TrueDoc is now available to third-party developers, all the major browsers and the World Wide Web Consortium.

TrueDoc, which consists of recording and viewing engines, is currently part of the Envoy portable-document application from Orem, Utah-based Novell Inc. It is also supported by Tumbleweed Publishing Essentials, an Envoy-based portable-document creation package from Tumbleweed Software Corp. of San Francisco.

TrueDoc supports TrueType and Type 1 fonts. It captures the outline of a character's shape with its own curve-fitting and hinting software. Characters are fully scalable, the company said. TrueDoc text can be cut and copied, but the font attributes are tied to the Web document. The technology is platform- and resolution-independent and highly compressed. According to Bitstream, the fonts arrive over the Web as fast as text.

"It's so fast that we don't need to go through any progressive-rendering thing," said Stefan Wennik, Bitstream manager of marketing and communications. Adobe's on-line font technology includes progressive rendering "because [its technology] is so slow. It was a performance issue."

Daniel Will Harris, who manages a typeface site on the Web called Will Harris House, said he prefers TrueDoc's font handling to Adobe's strategy. "It's very compact and will work with any typeface in any format in any language," Harris said.

Bitstream said it will reveal details about its TrueDoc licensing plans this month. The company also said it is putting the finishing touches on TrueDoc libraries that improve font fidelity within Java applets.

Meanwhile, Adobe in February announced that it is working with Netscape and Apple to create an open HTML 3.0 extension for embedding Type 1 and TrueType fonts in Web pages.

Strategic alignments

The next version of Adobe's Acrobat portable-document software, code-named Amber and due this summer, will support the new font technology. The technology "could be applied in other file formats, like HTML," said Adobe spokesman Rick Brown. "All we're doing is embedding the information that defines the font. It's not developed exclusively to work with Acrobat." Brown said Adobe will work with Internet-standards organizations to get their endorsement of the technology.

Adobe said its embedding technology will allow browsers to render text progressively, so Web users will be able to read it as the fonts download.

All three groups plan to create open HTML specifications and promote theirs as the industry standard.

The downloading process begins with basic text, employing the font-substitution technology built into Acrobat. Next, hyperlinks and images are streamed; finally, the client receives the formatting information for text. Font information is downloaded only for those characters that are used, helping to speed delivery, Adobe said.

The embedded, compressed font will travel swiftly over 14.4-Kbps connections, according to Adobe, although specific figures were unavailable.

According to Harris, the current version of Acrobat raises issues of font security because someone could reuse fonts received in an Acrobat file. "The current way that they're handling fonts is not good," Harris said. "It's clunky and not secure." Amber corrects this problem, he said.

However, Rob Babcock, senior product manager for Acrobat, said that the current and future versions of Acrobat place fonts on users' machines temporarily, and only Acrobat can access them. The fonts are flushed from users' systems when they quit Acrobat. "You can't directly cut an embedded font out of a Portable Document Format [PDF] file and use it on your system," he said.

Julie Gomoll, president of Go Media Inc., a Web publishing and graphic design company in Austin, Texas, said her company does not recommend that clients use PDF documents. "It's a lot to ask users to take that extra step to download documents," she said. PDF is useful for printing purposes, she said, but as an on-line tool it is too inefficient.

Free fonts

One part of Microsoft's strategy for on-line fonts is centered on its own TrueType fonts. The Redmond, Wash., company is making a core set of fonts available free to users and developers, "the idea being that eventually everyone has these fonts installed so designers can rely on them being there," said Andrew Pennock, Microsoft program manager for typography. Designers can use the FontFace HTML tag to specify TrueType fonts within their pages.

Ultimately, the company's goal is to "make font embedding work on the Internet," Pennock said. According to Pennock, Microsoft's font-embedding technology is already available in his company's Word and PowerPoint applications; it will eventually be upgraded and freely licensed to developers of browsers, authoring tools and other applications. But in the near future, on-line uses for the technology will be limited to Microsoft's own Internet Explorer browser and authoring tools.

The font-embedding technology creates subsets of the fonts, compresses them and sends them to the browser along with the Web page. There is no progressive rendering with Microsoft's plan yet. "We decided it's better to do it in one hit and take up less overall time," Pennock said. The fonts will come up on the Web page faster than bit maps do now, he added.

It is not yet clear which version of Explorer will support the technology, but chances are it won't be in Version 3.0, the next revision. Once the function is available through Explorer, Microsoft said, it plans to pursue licensing agreements to add the technology to third-party authoring tools.

Agfa, a division of Bayer Corp. of Wilmington, Mass., has announced its support for Microsoft. Sources said Agfa is discussing ways of integrating its lossless font compression-decompression technology with Microsoft's embedding scheme. □

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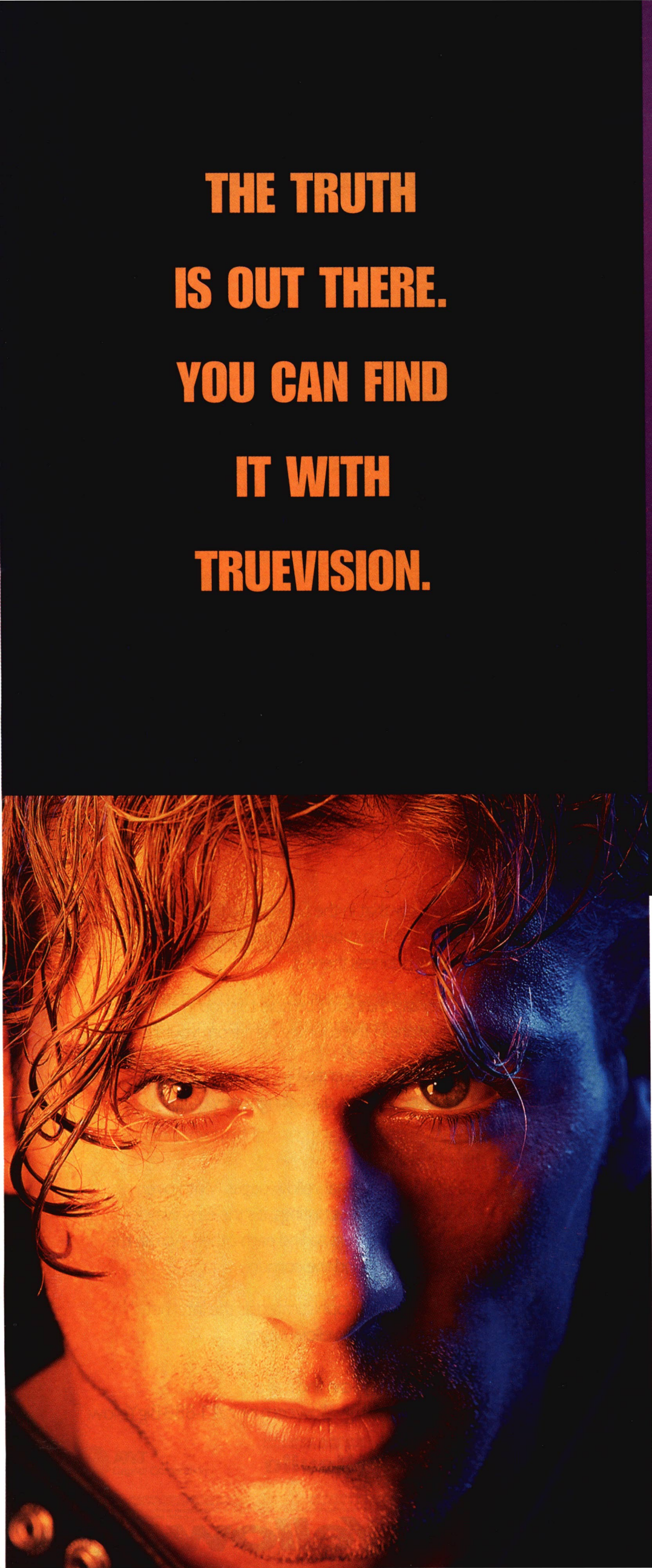

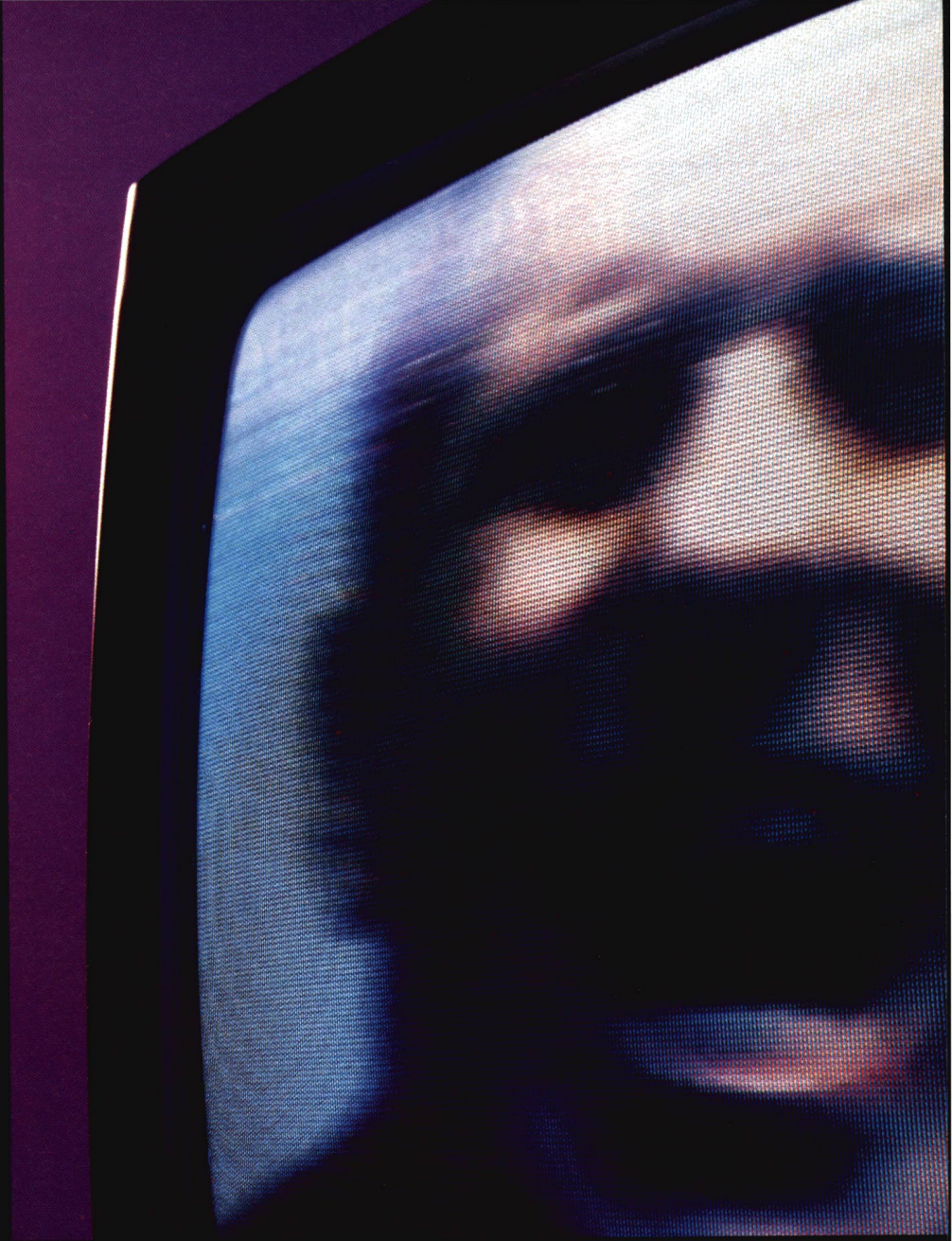

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Avid puts editor on PCI

By Kelly Ryer

There's no question that Avid Technology Inc. has been a heavy user of NuBus. The seven flavors of Avid's Media Composer nonlinear video-editing systems used from three to five NuBus cards each. However, the company is now making the transition to PCI with Media Composer 6.1.

Avid will ship the new board sets at this week's National Association of Broadcasters show in Las Vegas.

Base configurations of the new PCI versions, which require the same number of boards, range in price from $18,000 for the Media Composer 400S to $90,000 for the Media Composer 8000. Upgrade prices for NuBus users range from $5,000 to $12,000; to switch to PCI, users of NuBus systems must also buy a Power Mac 9500.

While Avid declined to provide performance figures, Bill Caffery, analyst at Stamford, Conn.-based Gartner Group Inc., said the move to PCI will improve throughput for digital video. "Pumping that amount of bits through NuBus is like driving a golf ball through a garden hose. You can do it, but why would you want to?

Avid's new PCI video-editing boards require a Power Mac 9500; the company's software tuneup supports alpha channels in QuickTime movies.

"PCI is much better," Caffery said. "Relief on that ultimate bottleneck is always welcome."

Media Composer 6.1 has several new features, including support for resolutions of 720 by 486 pixels and the ability to import QuickTime movies containing alpha channels.

Audio controls now have a "rubber band" interface that enables users to set audio levels by manipulating lines graphically. A new security feature for multiuser systems lets users lock video clips and other media together in a single "bin."

The company said it will deliver Media Composer 6.1 software for its NuBus line this summer.

Avid Technology Inc. of Tewksbury, Mass., can be reached at (508) 640-6789 or (800) 949-2843; fax (508) 640-1366. □

Apple rounds out QTVR with tools

Software eases content creation

By Kelly Ryer

Apple's fledgling QuickTime VR technology has sprouted another couple of feathers. The company last week released two beta tools designed to simplify the creation of QuickTime VR content.

The tools, Make QTVR Object and Make QTVR Panorama, are available through Apple's QuickTime VR Web site at http://qtvr.quicktime.apple.com/.

Make QTVR Panorama lets users transform 3-D renderings, wide-angle photographs or photos from panoramic cameras into navigable panoramas of up to 360 degrees, Apple said.

Make QTVR Object allows multimedia producers to convert a series of sequential still views of an object into a QuickTime VR object movie, which can be rotated to view the object from multiple angles. To create a full-fledged QuickTime VR environment with multiple nodes or hot spots, however, developers must still use the QuickTime VR Authoring Tools Suite.

According to Apple, Version 1.1 of QuickTime VR is in progress, and selected developers are already reviewing the QuickTime VR 1.1 API. The company said it plans to announce a ship date for 1.1 at the Apple Worldwide Developers Conference, which will be held in San Jose, Calif., in May.

In addition, source code for the two new tools and the QuickTime VR 1.0 file format is now available to registered developers.

The QuickTime VR Authoring Tools Suite 1.0 is available for $495 from the Apple Developer Catalog (formerly APDA) at (800) 282-2732. □

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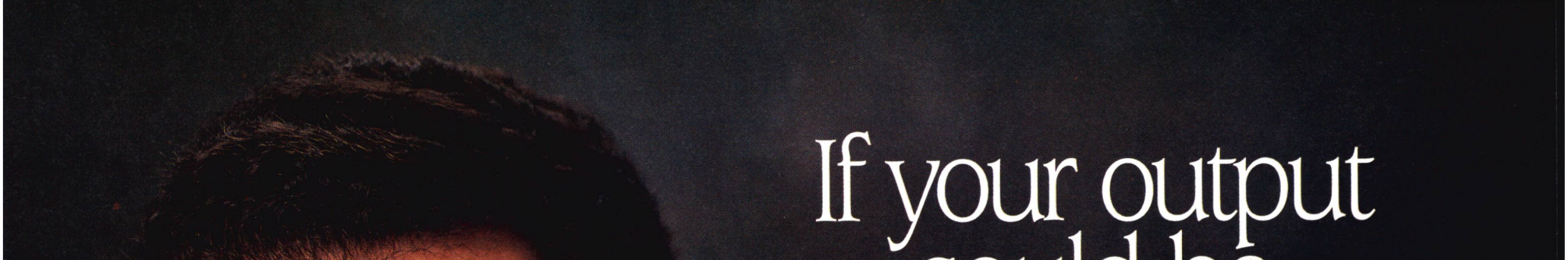

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Midrange flatbeds are a hot ticket at a great price

By Bruce Fraser

Scanners under $10,000 now match the productivity of their more costly cousins.

With so many scanners available for well under four figures, one might wonder why anyone would spend several thousand dollars on a flatbed scanner. Yet the midrange flatbed market has never been hotter nor more keenly contested. Established players Microtek Lab Inc. of Redondo Beach, Calif., and UMAX Technologies Inc. of Fremont, Calif., have each formed an OEM relationship with a major pre-press player — Microtek with Agfa Division of Bayer Corp. of Ridgefield Park, N.J., and UMAX with Linotype-Hell Co. of Hauppauge, N.Y. — to offer capable midrange scanners accompanied by software that previously was found only on high-end pre-press scanners.

So what do you get in a scanner for the extra money? Probably the biggest difference in terms of specifications is that the midrange flatbeds have a considerably wider dynamic range than their lower-priced siblings. But an equally important distinction, one that the specs don't make obvious, is that the midrange scanners are capable of much higher levels of productivity because of features such as on-the-fly sharpening and color-space conversion, as well as batch scanning.

Dynamic range is the range of tones — from white to black — that the scanner can reliably record. It has no direct relationship to the bit depth at which the scanner operates. Instead, dynamic range is entirely determined by the analog sensitivity of the CCD (charge-coupled device). The brightest white it can handle is determined by the point at which the CCD starts to bloom, and the darkest black it can handle is determined by the point at which the noise in the system overwhelms the signal.

The latter is sometimes determined rather arbitrarily, since the decision as to when the amount of noise becomes unacceptable has an element of subjectivity about it. Some vendors state the dMax — the blackest black the scanner can see — as the point at which the scanner can no longer discriminate between shades, while others take a more conservative approach and use the point at which the signal becomes too noisy to use.

Bit depth, on the other hand, dictates the number of individual shades into which the scanner can divide its dynamic range. A wider dynamic range can generally benefit from a greater bit depth, but there's no absolute linkage. Most of the scanners in this price range capture at least 10 bits per color per pixel.

Today's midrange flatbed scanners are also capable of productivity levels that once were the sole purview of much more costly units, in part because today's host computers are sufficiently powerful to take care of operations such as color- space conversion and unsharp masking on the fly, tasks for which yesterday's high-end scanners used built-in dedicated computers. The software accompanying the current generation of scanners is also much smarter than the previous generation's, with sophisticated automatic features for setting contrast and color balance optimally on each image.

Dynamic flatbeds

Microtek's ScanMaker III is a single-pass flatbed with an optical resolution of 600 by 1,200 dpi. It captures 12 bits per color per pixel, and the accompanying software allows you to downsample to eight bits per color, or to pass the entire 36-bit capture into Adobe Photoshop. Microtek does not provide dynamic-range specifications. However, the ScanMaker III hardware is the basis for Agfa's Arcus II scanner, for which Agfa claims a dynamic range of 3.0 and a dMax of 3.2.

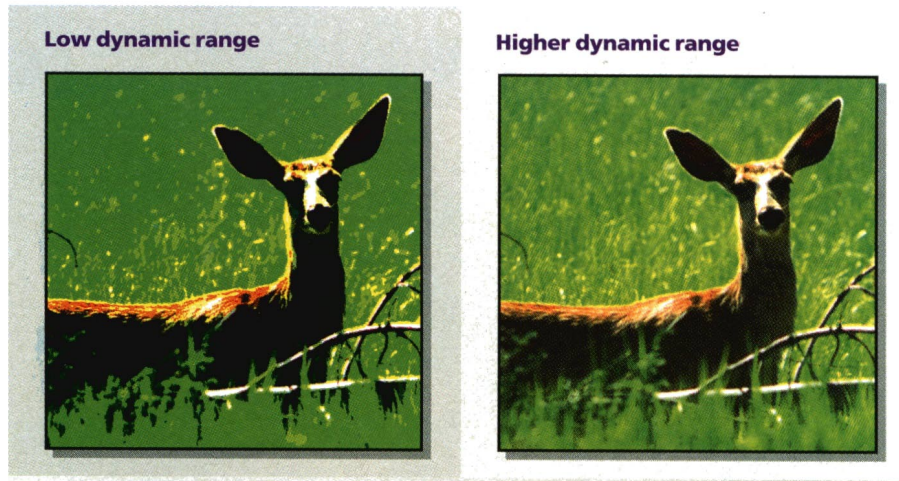
The Agfa Arcus II includes a transparency adapter as standard equipment (it's an option with the Microtek package), but the bigger difference is the addition of Agfa's FotoLook and FotoTune software, which allow color-space conversion and unsharp masking on the fly, thereby enabling users to produce sharpened CMYK scans directly from the scanner. It also includes calibration software and targets for the creation of scanner profiles in either ICC (International Color Consortium) or Agfa's ColorTag formats.

Agfa's new $5,500 DuoScan not only boasts the highest resolution in its price range, it also uses a new design that lets the user scan reflective art and transparencies without compromising the quality of either one. It uses dual cold-cathode lamps and an 8,000-element trilinear CCD to provide a true optical resolution of 1,000 by 2,000 dpi at 36-bit-color depth, with a dynamic range of 3.3.

The DuoScan's TwinPlate design provides two optical paths, one for transparencies and one for reflective art. This eliminates the glass plates between the lens and the transparent original and with them a common source of optical distortion. It also brings productivity benefits: The user can set up reflective art in one bed while scanning a transparency in the other, or reload the transparency tray while reflective art is scanning. The accompanying software includes Agfa's FotoLook and FotoTune and the full version of Photoshop.

UMAX offers the $3,495 PowerLook II, a 600-by-1,200-dpi one-pass flatbed that claims a dynamic range of 3.2 with 36-bit capture. UMAX claims that the PowerLook is the fastest scanner in its class, capturing a full-page 300-dpi scan in 41 seconds. The accompanying MagicScan 2 driver soft-

See Midrange, Page 20



Dynamic range is the range of tones, from black to white, that a scanner can reliably record. The two photos above show examples of low and high dynamic range and how low dynamic range can affect the contrast of a scanned image.

With lower prices, scanning becomes more accessible

By Eric Taub

Users choose scanners based on bundled software rather than hardware specifications.

With large sums of money riding on crucial artistic decisions, the entertainment industry pays great attention to marketing materials, which can make or break a product. So when Neal Hettinger, co-owner of Hollywood-based The Lead Pencil Design Studio, began to work on a brochure promoting the international sale of the famed "Pee-Wee's Playhouse" television series, he knew that he'd be expected to create myriad design concepts in a very short period of time.

"I couldn't have done this work without an in-house scanner," Hettinger said. "Paul Reubens [Pee-Wee Herman] was very concerned that the brochure promote the series in an exciting and accurate way. We created many variations of the basic concept on a daily basis. Paul would approve some elements and send me back to correct others," he said. "We had to have each revision ready for him within 24 hours, and that could never have been done if we had to send each piece of art out to a service bureau to be scanned."

For his scanning work, Hettinger used an Agfa Arcus II from the Agfa Division of Bayer Corp. of Ridgefield Park, N.J.

"This is the entertainment industry," Hettinger said. "With us, time is everything. We used to send out to service bureaus for scans, but that would have been impossible with this job. Instead of spending $20 and waiting at least one day to get it back, I can make a scan in five minutes for $10 and have the next variation of the job back to the client in less than one day," he said.

Bring it home

A steady decline in scanner prices, coupled with an increase in speed and output quality, has encouraged many graphic artists

See Low prices, Page 20

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Midrange

From Page 18

ware allows for batch scanning but not sharpening or color-space conversion.

Moving up in the market, UMAX offers the Mirage D16L, a large-format dual-resolution scanner that offers 400-by-800-dpi hardware resolution with the 12-by-17-inch image area, or 800-by-1,600-dpi capture of a smaller 6-by-17-inch image area. It captures a dynamic range of 3.2 at 30 bits per pixel. A transparency adapter is standard equipment. The large bed and the accompanying software lets users scan batches of eight 4-by-5-inch or 32 35mm transparencies, as well as oversize originals, such as newspapers.

The UMAX PowerLook and Mirage engines form the basis for Linotype-Hell's first forays into the desktop scanner market, the Saphir and Opal scanners. Linotype-Hell marries UMAX's engines to the same LinoColor software they use to drive their high-end scanners. ScanOpen ICC allows the user to create custom ICC device profiles compatible with LinoColor and with Apple's LinoColor-based ColorSync color-management system.

This powerful software combination lets users scan directly into any CMYK color space for which an ICC device profile is available or directly into device-independent CIELAB for unambiguous color representation. LinoColor includes automatic image-analysis and -correction features. Sharpening and descreening features are also included. The $3,995 Saphir handles reflective originals up to 11.7 by 8.4 inches or transparencies up to 8.3 by 10 inches, while the $9,900 Opal boasts the same dual resolutions and image areas as the UMAX Mirage D16L on which it is based.

Drumming up business

Perhaps the best illustration of just how competitive the midrange market is becoming and of the degree to which the various scanning technologies are converging is the new $9,995 price on the ScanMate Magic unit from ScanView Inc. of Foster City, Calif. The Magic, which uses photodiode sensors rather than the photomultiplier tubes found in most drum scanners, is an entry-level desktop drum scanner with resolutions up to 2,000 dpi and a dMax of 3.0, captured at 36 bits per pixel.

At the high end, drum scanners are favored because they're highly productive, but the Magic's forte is on-demand high quality and high resolution, rather than high throughput. The midrange flatbeds, in contrast, are reaching levels of throughput that, until recently, could have been attained only by high-end drum scanners, and they're also easier to load and operate, which means that much of the work of scanning can be done by less-skilled personnel. At the same time, they're offering the level of fine precision control that experts need to produce demanding work.

With typical dMax specifications hovering around 3.2, flatbed scanners are still a little shy of the dynamic range needed to handle very high-contrast chromes, but they're more than adequate for much, if not most, of the work that gets scanned for print today. □

Low prices

From Page 18

and design shops to bring their scanning needs in-house. As companies continue to tighten their budgets, pre-press professionals are finding that whatever they can do to keep costs and turnaround time low will give them the competitive edge.

"With my old Mirror scanner, I could create a 4-by-5[-inch] color image at 300 dpi in 10 minutes," said Susan Abbott, owner of the Minneapolis-based graphics business Abbott and Abbott. "But today, with my new Epson ES1200-C scanner [from Epson America Inc. of Torrance, Calif.,] I can do the same work in one minute. And both scanners cost me around $1,000."

Flatbed scanners with a 24-bit color depth capable of creating 600-dpi images can be purchased for as little as $700, with 30- and 36-bit machines creating up to 1,000-dpi images priced between $3,000 and $7,000. As prices and quality move in opposite directions, the question for many is how to decide which one to buy.

Manufacturers' competing claims of density range, color depth and optical resolution all need to be taken lightly; standard measurements that can accurately determine one machine's image quality compared to another's do not exist. For example, a lens that doesn't focus or a scanner that comes bundled with minimal software will negate other positive attributes.

Michael McGlynn, art department manager for Mirror Image Inc. of Cambridge, Mass., a photo reproduction and screen-printing company, said, "Scanner equipment is so good today, often service and support become the reasons to buy or not."

Ron Day, a Weehauken, N.J.-based free-lance Adobe Photoshop retoucher and pre-press manager for Pubset Inc. of Union, N.J, said, "I haven't seen a discernible difference between a $5,000 Agfa machine and my $1,200 Epson scanner, which came bundled with Photoshop and Scantastic [from Second Glance Software in Bremerton, Wash.] scanning software."

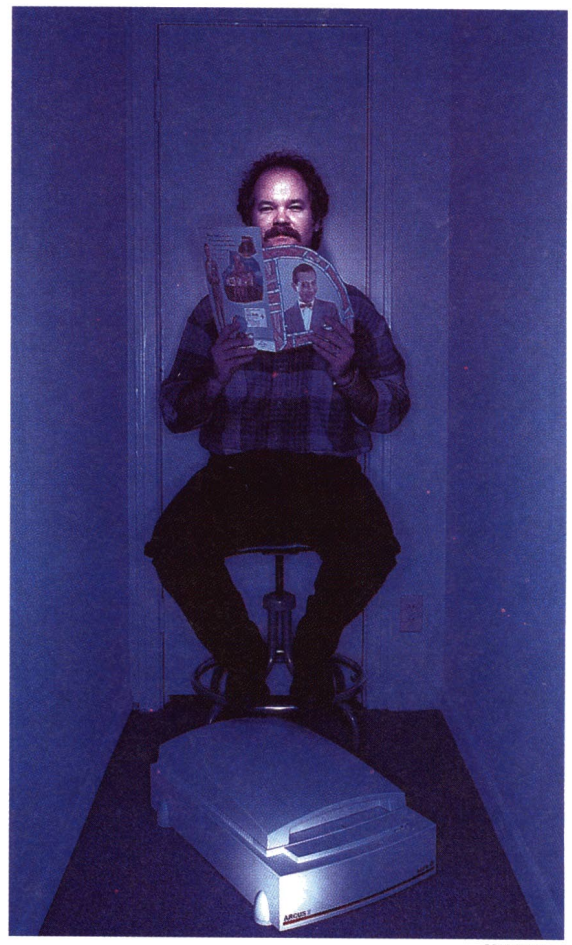
George Abbott, head of the graphics department at A.G. Johnson, a printing and service bureau based in Minneapolis, said: "The difference today is not so much in the equipment, but in the software that comes with the scanner. You always need to correct an image, so make sure you get the best possible Photoshop plug-ins you can."

Abbott used to scan the art that his wife, Susan, needed to create bakery advertisements destined for newsletters and magazines. At other times, she would take her artwork to a service bureau to create a stat.

But that created problems for Susan Abbott. "Stats can't be changed in size or manipulated in other ways, as you can do with a computer," she said. "And often I just didn't have the time to go to a [service] bureau."

As technology has improved, George Abbott said, so has his speed. "While my first scanner was very slow, I was still glad to have it. But the new Epson gives me faster scans, and its 600-dpi capability and bundled Scantastic software gives me cleaner type and line art."

New lower prices have affected the higher-end drum scanner market as well. One model, the ScanMate Magic, is now available for $9,995 from ScanView Inc. of Foster City, Calif. This recent price reduction for the traditionally high end of the line has allowed businesses that could not previously have afforded drum scanners to purchase them.



ERIC TUCKER

Neal Hettinger, co-owner of The Lead Pencil Design Studio in Hollywood, says he couldn't have done the Pee-Wee Herman brochures, with all the turnaround demands, without an in-house scanner.

Working some magic

Steven Bowden, computer graphics and imaging specialist for the Boston Herald, convinced the newspaper to purchase a ScanMate Magic after the company was forced to regularly give monetary credit to companies unhappy with the output quality of their advertisements running in the paper's Sunday magazine.

"Our copy deadline for the magazine is earlier than our ad deadline," Bowden said. "So the magazine was ready to go to press when ads were still coming in."

The paper either had to resort to paying an outside service bureau $200 for a rush scan or have a company photographer shoot the image. As a result, costs were too high and often pictures of various materials, such as fabrics, came out muddy and undefined.

"We even tried using the unsharp masking tool in Photoshop to improve the image quality, but that didn't help," Bowden said. "Buying the ScanMate Magic was a no-brainer," he said. "I'm quite sure that in 18 months, we've recouped the cost of this machine. But if there hadn't been one at this price, we couldn't have afforded to purchase such a device."

Despite the improvements in flatbed scanner resolution and bit depth, many still use these machines primarily to create FPO (for position only) images, rather than production output. Yet a few are proving that even lower-end equipment, in the right circumstances, can create work of production quality.

"When my partner left the business, she took all the conventional paste-up knowledge with her," said John Cosenza, owner of Kingston, N.Y.-based Village Graphics Inc., a creator of catalogs, newspaper ads and brochures.

"So I decided to do away with the halftone process and bought myself a Relisys 4830T scanner," from Relisys of Milpitas, Calif. "As I was creating work for newspapers, the quality of the scans, coupled with the manipulation of the images in Photoshop, allowed me to dispense with conventional stats pasted on my artwork," Cosenza said.

"The scanner paid for itself in the first month. And a few nights spent reading the Photoshop manual was worth its weight in gold. Learning how to manipulate images in that program allowed me to create better work with my lower-end equipment," he said.

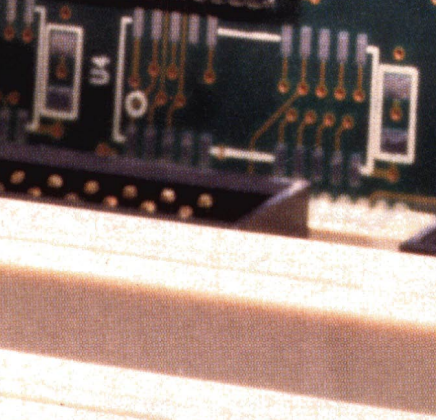
Test drive

With scanners providing similar features and quality within a wide price range, what then is the best way to find the right machine for the job? If possible, test the machine yourself with your own artwork. "I've gone to dealers and sat in front of scanners," said Mirror Image's McGlynn. "All that the sales people did was read the machine's specs to me. I can read the specs myself. Now, to test a scanner, I'll bring art that has a lot of shadow detail as my standard."

But testing machines is not always an easy task. Anthony Roukis, an amateur photographer from Ridgewood, N.Y., wanted a scanner to digitize hundreds of family photographs. But when he went to try out various models, he couldn't get to first base. "I can go to a store and get a printer sample, but I could never do this with a scanner. Maybe it's New York City, but nobody had 10 minutes for me," he said.

Instead, Roukis searched the Web for other scanner users and eventually began corresponding with them, listening to their pleasant scanner experiences as well as their tales of woe. "If it hadn't been for the Internet, I would have been lost," he said.

Finding someone who can talk knowledgeably about scanners is key, says Mirror Image's McGlynn. "With most high-end scanners, like the Linotype Saphir [from Linotype-Hell Co. of Hauppauge, N.Y.,] the equipment is a lot more sophisticated than the reps who sell it," he said. "In the end, you just have to find someone you trust who will stand behind their machines." □



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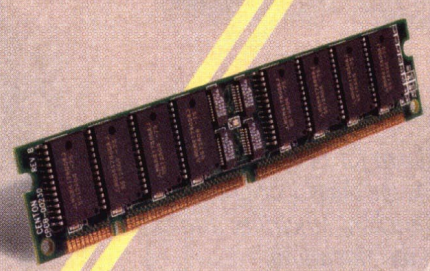

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Tim Gill, Chairman and Senior Vice President of Research and Development, Quark, Inc.

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Michael Cowpland, President and CEO, Corel Corp.

"Intuit views the Macintosh as a key platform for our consumer and small business software products. As the developer of top-selling Macintosh applications such as Quicken, MacInTax and QuickBooks, Intuit is fully committed to the Macintosh."

Scott Cook, Chairman, Intuit

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Sally Narodick, CEO, Edmark

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RunShare 2.0 boasts quick times on OT, PCI

File transference at 1.5 MB per second

By James Staten

Network traffic in pre-press houses may soon switch into overdrive thanks to Run Inc. The company in May will ship a new version of its RunShare AppleTalk accelerator that is capable of transmitting large files at 1.5 Mbytes per second.

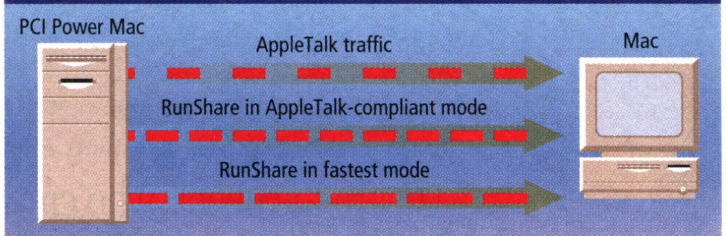
RunShare Graphics Server Accelerator 2.0 features a new method for speeding data transfers, and a version for PCI-based Macs supports Fast Ethernet and Asynchronous Transfer Mode (ATM).

Run claims its PCI version is two to four times faster than any other file or print server solution. The company said it will serve large files up to 100 percent faster than a Windows NT-based file server. Connected through a 100BASE T Ethernet port on a simple switching hub and PCI-based Mac server, Version 2.0 offers throughput at about 100 Mbytes per minute to multiple 10BASE T clients, Run said.

RunShare complies with all existing AppleTalk-based network standards and can be used in mixed-network environments. Supported architectures include 100BASE T, 10BASE T, ATM, Fiber Distributed Data Interface (FDDI) and token-ring as well as

See Run, Page 26

RunShare's performance secrets



When used over a protocol-dependent device such as a router or bridge, RunShare speeds transfers by reducing the idle time between data packets. Over LANs, RunShare breaks the AppleTalk protocol and increases packet sizes for even faster performance. On a 100BASE T connection, RunShare can transfer data at 100 Mbytes per minute.

Surfboard: A remote for the Web

By Joanna Pearlstein

Giving channel surfing a whole new meaning, Abbott Systems Inc. this month will ship Surfboard, remote-control software for the Web.

Expected to cost between $29 and $39, Surfboard will treat Web browsers as if they were a TV set and Web sites as if they were TV channels. Used with Netscape Navigator or Microsoft Corp.'s Internet Explorer, Surfboard will maintain a list of URLs (uniform resource locators) that can be organized by category; users will move from one site to another by clicking on a desired site's listing. An Apple event will transfer the site's URL to the browser, Abbott said.

Users will be able to add URLs to Surfboard and pass them to other applications through Macintosh Drag and Drop.

Customer support for the product will be provided directly through the application. Abbott said that when users click on the company logo within Surfboard, they will be connected to a Web site designed specifically to address technical questions.

Abbott Systems Inc. of Pleasantville, N.Y., is at (914) 747-4201 or (800) 552-9157; fax (914) 747-9115; abbottsys@aol.com; http://www.abbottsys.com.

Fifty-seven million channels and nothing on? Abbott Systems' Surfboard uses a television metaphor to organize Web sites.

NCSA cranks out update for Mosaic

By James Staten

In the midst of the Netscape-Microsoft browser war, the organization that first popularized the Web is working on a new version of NCSA Mosaic.

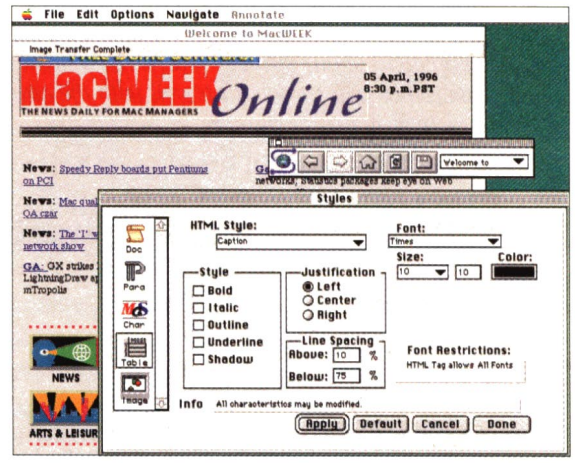
Version 3.0 of the free Web browser from The National Center for Supercomputing Applications at the University of Illinois at Urbana-Champaign adds support for a variety of HTML tags and introduces a few new capabilities.

Available in a pre-release version, NCSA Mosaic 3.0 supports link tags, which let Web page designers embed site-navigation controls into HTML documents. A Web page that uses link tags can include a collection of icons that take the client to the home page; to the first, next or last document in a series; or to an index.

Version 3.0 supports HTML tags for tables; Netscape Communications Corp.'s frames; adding borders and captions to images; and setting the width, height and alignment of page elements.

Performance enhancements include multithreading and native

See Mosaic, Page 26



NCSA Mosaic 3.0 features extensive Web page display options and a tool bar that can be torn off and used as a floating palette.

New options for connecting remote offices

By Joanna Pearlstein

This month's Networld+Interop in Las Vegas saw the debut of a host of networking products across the remote-access spectrum.

▸ **Ascend Communications Inc.** broadened its product line with the $2,400 Max 200Plus, an eight-port remote-access switch that routes TCP/IP, IPX, Point-to-Point Protocol (PPP), Serial Line Internet Protocol (SLIP) and Apple Remote Access Protocol.

It works as a dial-in and dial-out remote-access server; administrators can install up to eight PC

See Remote, Page 26

Spring brings slew of data-access tools

By Clifford Colby

A handful of companies are sprucing up their database-access tools, with several of the applications gaining Internet features.

▸ **Brio Technology Inc.** of Mountain View, Calif., is now shipping BrioQuery Enterprise, an expanded version of its BrioQuery family of SQL query tools. New to Enterprise is Open Metadata Interpreter, which lets users read metadata from sources other than Brio. The new version also allows users to drill down through a chart to see the data that makes up the graphic. Enterprise Navigator and Explorer cost $795 each for a single Mac or Windows copy and $1,795 for a Unix version; Designer costs $2,995 for Mac or Windows and $4,995 for Unix.

▸ **Brossco Systems Inc.,** also of Mountain View, this month shipped Version 3.0 of its Voyant data-analysis and decision-support application. The update lets users create a local data store that they can run queries against. Version 3.0 also provides access to Sybase databases through Sybase Inc.'s OpenClient middleware. A Designer version of Voyant costs $1,295, and a five-user license is $495. The company said it expects to have an Open Database Con-

See Tools, Page 28

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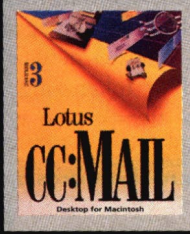

cc:Mail is the most comprehensive e-mail system for the Macintosh. The new Release 3 features include: built-in AppleScript support which lets you drag-and-drop commonly used addresses, folders, and other objects to the desktop for easy accessibility; cc:Mail Rules which makes managing your e-mail easy by automating everyday tasks; and cc:Mail Viewers which let you view and print attachments even if you don't have the application with which they were created. When it comes to e-mail for the Macintosh, nothing is more complete or easier to use than cc:Mail.

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Mosaic

From Page 24

support for Open Transport. The new version supports Hypertext Transport Protocol Keep Alive, a server function that maintains a connection to the server while retrieving multiple files.

Version 3.0 reads client-side image maps and interprets Portable Network Graphics, a new image format optimized for delivery over networks.

Other enhancements include greater control over how Web pages are displayed and support for Apple's speech technology. In addition, the control strip, which traditionally appears at the top of the browser window, can now be hidden or torn off and used as a floating palette.

All these new features may be moot when users compare Mosaic to its offspring. According to Sunnyvale, Calif.-based Yahoo! Corp.'s latest statistics, compiled in January, NCSA Mosaic accounts for only 1.7 percent of all browser traffic on the Internet.

"A big part of their market is licensees," said Bill Woodcock, network architect for Zocalo, an Internet consulting firm in Berkeley, Calif. He said many corporations and education sites license the product for use in intranets or integrate it with custom applications.

Randy Pitzer, a spokesman for Spyglass Inc. of Naperville, Ill., an NCSA Mosaic licensee, said his company will integrate some of NCSA's improvements into its Enhanced Mosaic.

Conversely, "some of their new features come from us," Pitzer said. For example, NCSA Mosaic 3.0 uses Spyglass' plug-in architecture to interoperate with security tools.

The features of Mosaic 3.0 could reach an even wider audience: Internet Explorer from Microsoft Corp. of Redmond, Wash., is based on Enhanced Mosaic.

NCSA Mosaic 3.0 can be downloaded from ftp.ncsa.uiuc.edu/Mac/Mosaic.

The National Center for Supercomputing Applications at the University of Illinois at Urbana-Champaign is at http://www.ncsa.uiuc.edu or mosaic-m@ncsa.uiuc.edu. □

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Server to the Macs...

Remote

From Page 24

Card modems or four dual-channel ISDN (Integrated Services Digital Network) PC Cards. ISDN channels can be aggregated or used separately.

▶ **Proteon Corp.** debuted the GlobeTrotter Internet router line. Aimed at businesses that want to connect remote LANs, the $1,195 GlobeTrotter 72 will route TCP/IP, AppleTalk and IPX traffic. It will include an ISDN Basic Rate Interface and a 10BASE T connection. Due in June, the router will be sold with either a U interface, which comes with a built-in NT1, or an S/T interface.

Proteon's GlobeTrotter 62, available now for $995, routes TCP/IP, AppleTalk and IPX traffic. It provides asynchronous dial-up and synchronous Frame Relay or leased-line IP connectivity.

Shiva's LanRover Access Switch can support up to 100 concurrent connections.

▶ **Shiva Corp.,** marking its entry into the high-end market, announced the LanRover Access Switch, a remote-access switch that will use a cooperative multiprocessing architecture to allow more than 100 concurrent connections. Shiva said the switch, due this quarter, will be geared toward large corporate sites and allow connections between remote offices or dial-in by individual users.

The switch will transport TCP/IP, AppleTalk, IPX, PPP and SLIP traffic and will include ports for T1, leased line, ISDN Primary Rate Interface, V.34 modem and Ethernet modules. Shiva said it will ship token-ring and Fast Ethernet modules later this year.

The LanRover Access Switch will cost between $23,000 and $63,000, depending on configuration.

Ascend Communications Inc. of Alameda, Calif., is at (510) 769-6001; fax (510) 814-2300; http://www.ascend.com.

Proteon Inc. of Westborough, Mass., is at (508) 898-2800; fax (508) 870-5724; pro@proteon.com; http://www.proteon.com.

Shiva Corp. of Bedford, Mass., is at (617) 270-8300 or (800) 977-4482; fax-back (617) 270-8900; fax (617) 270-8599; sales@shiva.com; http://www.shiva.com. □

Run

From Page 24

WANs connected through routers.

Run said that when used over a protocol-dependent device such as a router or bridge, the product improves performance by reducing the idle time between data packets. This technique more fully utilizes the network bandwidth without compression or loss of data integrity. Over LANs, RunShare breaks from the AppleTalk protocol and increases packet size. This method reduces the dependency on the Mac's CPU, freeing the machine to transfer data at maximum speed, according to Run.

Typical performance gains average four times on Ethernet networks, three times on FDDI or token-ring networks, and more than five times over Fast Ethernet connections, Run said.

RunShare also speeds opening and saving files on a server from within the Finder, QuarkXPress, Macromedia FreeHand, and Adobe Photoshop and Illustrator, Run said.

On NuBus Macs, RunShare is sold as software plus a 10BASE T accelerator board for the server; on PCI-based Macs, the product is software-only. RunShare GSA 2.0 for PCI or NuBus Macs costs $1,799 or $2,299 with a five-client license.

RunShare clients are priced at $399 for two users, $749 for five users and $2,499 for 25 users.

Until June 30, customers who purchase the PCI solution will receive a free 10/100BASE T network interface card. Upgrades from RunShare 1.2 on NuBus Macs to 2.0 on NuBus are free.

Run Inc. of Mahwah, N.J., can be reached at (201) 529-4600 or (800) 478-6929; fax (201) 529-2090; info@runusa.com; http://www.runusa.com. □

HUBS & ROUTERS BEAT

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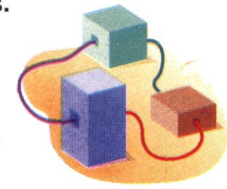


CNet Technologies Inc. of San Jose, Calif., shipped a trio of Ethernet devices this month. The $3,688 PowerSwitch SH-600i comes with six switched 100-Mbps Ethernet ports; a version that includes SNMP (Simple Network Management Protocol) capabilities is $3,888. The $2,688 PowerSwitch SH-1080 comes with six 10-Mbps Ethernet ports and two Fast Ethernet ports; an SNMP version costs $2,888. The $599 CN8020 Hub comes with 20 Ethernet ports. Phone (408) 954-8000 or (800) 486-2638; fax (408) 954-8866.

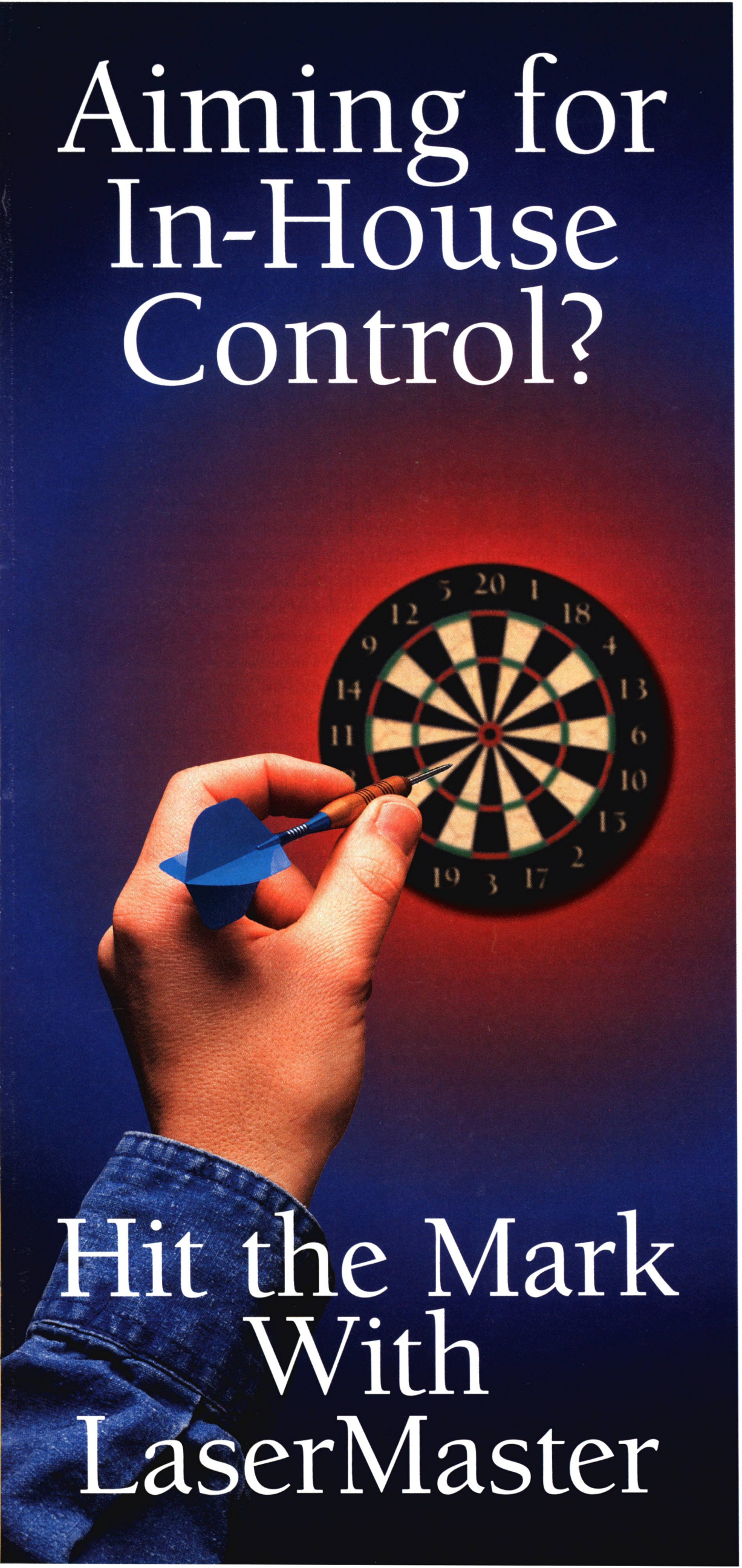
Engaging router. Engage Communications Inc. of Aptos, Calif., this month shipped its IP•Express line of routers. Priced from $995 to $1,995, depending on interface, the devices include T1-Fractional T1 and E1-Fractional E1 and come with EngageView, the company's management software for Mac, Unix and Windows platforms. Phone (408) 688-1021; fax (408) 688-1421; sales@engage.com.

Digi stacks up. Eden Prairie, Minn.-based Digi International Inc. last month shipped two new stackable hubs. The $1,199 4510H comes with 24 10BASE T ports and can be stacked 10 high; the $1,699 4511H has the same port count and can be managed via SNMP. Phone (612) 943-9020 or (800) 344-4273; fax (612) 943-5398.

Lantronix to manage from afar. Lantronix Inc. of Irvine, Calif., announced it will ship in May two Remote Monitoring probes. The devices, which will let administrators manage networks remotely, will be available in a $3,495 two-port model and a $4,995 six-port version. Phone (714) 453-3990; fax (714) 453-3995; sales@lantronix.com.

— By Clifford Colby

Aiming for In-House Control?



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Corel Optimized POWERPAGE

Tools

From Page 24

nectivity version ready this summer and a 32-bit Windows edition out by year-end.

▶ **Dimensional Insight Inc.** of Burlington, Mass., this month shipped DataFountain, a new suite of Web-based data-analysis tools. With DataFountain, developers can build a multidimensional data model that Web clients can browse and run queries against, the company said. Users can store data models either on a server or a client. DataFountain runs on Mac, OS/2, Unix and Windows platforms; pricing starts at $35,000.

▶ **Forté Software Inc.** of Oakland, Calif., said it plans to add Web capabilities to its set of high-end database tools. The Forté Web software developers kit, due this quarter, will allow users to develop Web-enabled Forté clients. The company said a later version of the Web SDK will support Sun Microsystems Inc.'s Java programming language. A site license of Forté Web SDK will be priced at $20,000.

▶ **Jyacc Inc.** is making its Jam client-server application-development tool kit Web-aware. The New York-based company said it intends to ship this summer Jam/Web, which will let users develop Web clients for accessing data stores. Jam/Web will run on Mac, OS/2, Windows and Unix Motif; pricing has not been set. □

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MacWarehouse 1-800-255-6227
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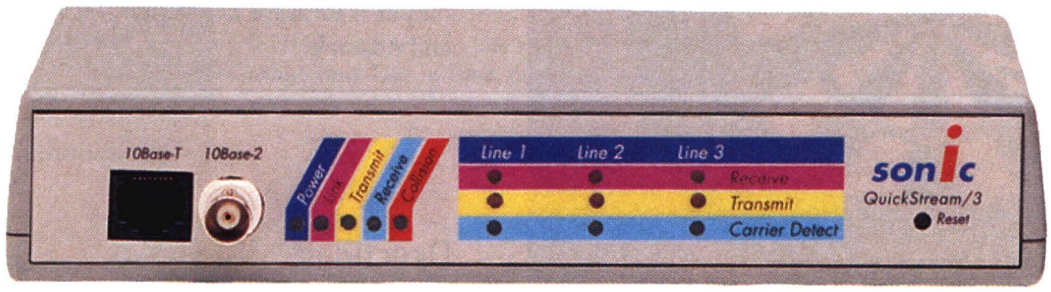
"Sonic Systems has a real winner with its QuickStream/3 remote-access server, at once powerful and easy to use."

– Mark H. Anbinder
MacWEEK, 1/29/96

score card
MacWEEK
◆◆◆◆



◆ **QuickStream/3** is an inexpensive, high performance PPP **Remote Access Server** which allows users to **connect** to your network from anywhere using standard modems or ISDN Terminal Adapters.

◆ That means telecommuters and travelling sales people can get up to the minute information from **databases**, send and receive **E-mail**, access group scheduling for meetings and even access **Internet** services such as **World Wide Web** (WWW), FTP, E-mail and News Groups.

◆ QuickStream/3 uses **Point to Point Protocol** (PPP), the industry standard protocol for cross platform remote access, so **Mac**, **PC** and **UNIX** users can all dial in and tap into the power of remote access. And since QuickStream/3 supports both **AppleTalk** and **TCP/IP**, the user doesn't have to learn new methods for accessing network services.

◆ Buy a QuickStream/3 between April 15 and June 30, 1996, and you will also receive the Dial-Out software upgrade, a $249 value, absolutely **free**. With the Dial-Out software, modems connected to the QuickStream/3 server can be accessed by users on the local network to send faxes, or to connect to online information services such as America Online, Compuserve, LEXIS/NEXIS or Internet Service Providers.

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Clients Supported	Mac, PC, UNIX	Mac, PC, UNIX
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AppleTalk Support?	✓	✓
TCP/IP Support?	✓	✓
Free/Unlimited Mac PPP Client Included?	✓	
CHAP/PAP Security?	✓	✓
Mac Management Software Included?	✓	✓
10Base-T and Thin Coax Network Connections?	✓	✓
Auto-Sensing Ethernet Connections?	✓	

Comparison done 3/19/96

FREE DIAL-OUT!

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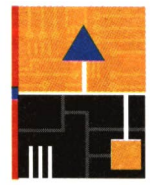
NETWORK TRAFFIC



▶ **FCRppp on OT**

▶ **Global updates fax software**

▶ **Paging Newton**

FCR Software Inc. of Cambridge, Mass., has released Version 1.5 of its PPP (Point-to-Point Protocol) client, FCRppp. The new version adds improved Open Transport compatibility and support for Apple's high-speed serial driver. FCRppp moves TCP/IP and AppleTalk traffic. … Sunnyvale, Calif.-based **Global Village Communication Inc.** is shipping GlobalFax 2.5.5, an update for its PowerPort Mercury fax modems. The revision is compatible with the PowerPC-upgraded PowerBook 500 models and the PowerBook Duo 2300c and improves Apple Remote Access speed. The update is available at http://www.globalvillage.com/support/ppupdate.html/. … A new line of switches from Calabasas, Calif.-based **Xylan Corp.** hit the streets in March. The first new PizzaSwitch provides 12 10BASE T connections, and the second has eight connections of any Ethernet type. The PizzaSwitches can also be configured to include Fiber Distributed Data Interface, Copper Distributed Data Interface and Asynchronous Transfer Mode ports. … **RNS** has added security features to its NetHopper remote-access servers and ISDN (Integrated Services Digital Network) routers. Version 4.2 of the Santa Barbara, Calif., company's software supports Security Dynamics' SecurID and the Internet Engineering Task Force's draft specification for Remote Authentication Dial In User Service. … Apple MessagePad 130 users can now be reached through **Socket Communications Inc.'s** Socket PageCard. New software from the Fremont, Calif., company lets Newton users send text messages to alphanumeric pagers and download messages. □

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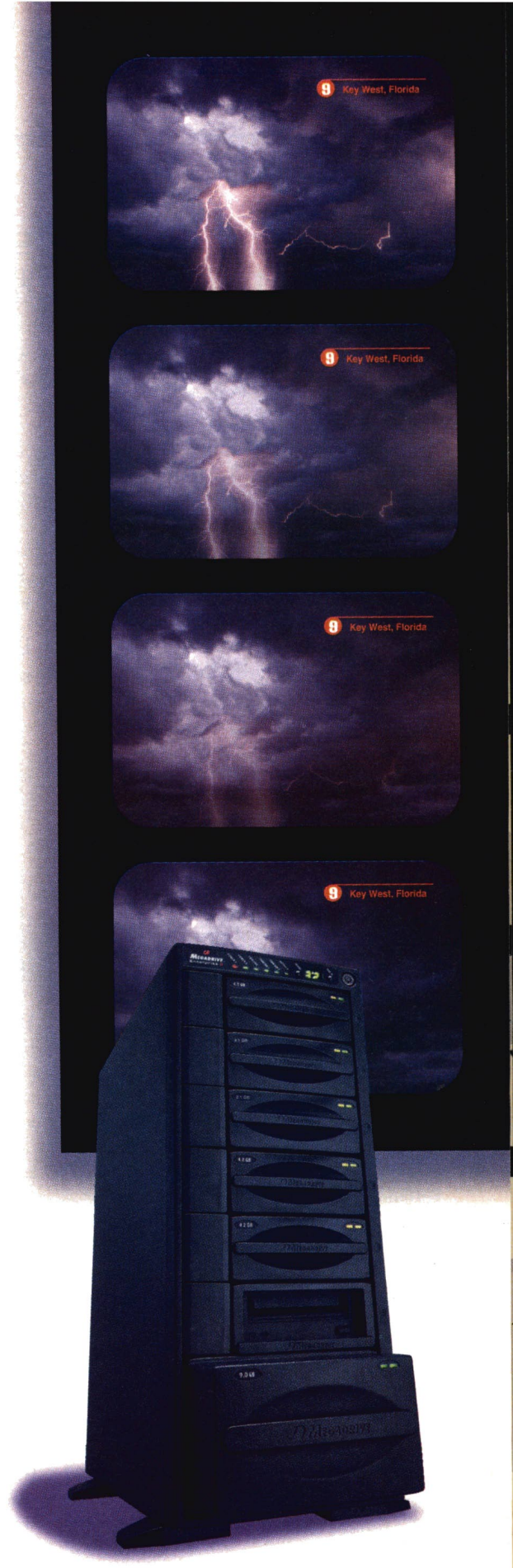

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BPA INTERNATIONAL

Coprocessor help

Earlier this month we published an article about large organizations that have abandoned the Mac or are planning to migrate away from it to Windows. Last week we ran a story about Reply Corp.'s new Pentium-based coprocessor PCI board. Although the connection is not self-evident, these stories are intricately related.

Apple is under tremendous pressure to hold its own against Windows 95 and NT at large sites where IS organizations hold sway. IS managers seem unfazed by the extra support costs that Windows demands.

These companies are determined to unnecessarily spend vast amounts of their organizations' monies to throw out perfectly good Macs, invest in brand-new Pentium machines, buy new software and retrain users for Windows. These managers are driven more by their inflamed fear that the Mac is dead than by the cold reality of what computing tools their users need.

A strong Reply seems in order.

By that we mean Apple needs to have a credible third party developing Windows-compatible solutions for Macs. Reply has made this commitment. If its PCI-based Pentium boards are reliable, high-performance and cost-effective, the cards could be part of the answer to Apple's problems in large organizations.

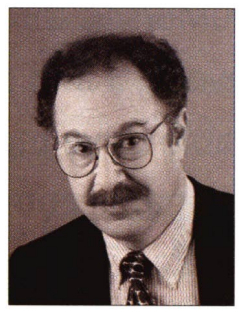
Apple should consider adopting Reply's products as its own. We know that Apple has been developing Pentium coprocessor boards, but here's an opportunity for the company to breathe life into a niche instead of competing with a third-party company. By selling and supporting Macs with Reply cards, Apple would not have to underwrite development or invest in marketing and distribution of its own add-on boards.

IS managers could feel more comfortable with a Mac-based coprocessor solution to a "Windows everywhere" directive. Not only would the same product be endorsed by Apple, but there would be a second source for the product — always a key point in IS planning.

It would be a bold move for Apple to take. But it's one that makes sense. □

THE SECOND DECADE HENRY NORR

Putting users in control is a key Mac advantage



Begging the indulgence of those readers bored with the topic, I want to devote one more column to the notion of an OS registry, a database I think should be built into the OS to keep track of its components.

I realize users who have had no major problems installing System 7.5 Update 2.0 may not share my obsession with this scheme, but those of us who have had problems realize that it raises some larger issues — over and above the current update — that are worthy of consideration.

A technology with a pedigree

The idea is hardly new. I've mentioned it before (see 10.24.94, Page 26), as has my colleague Ric Ford (see 12.05.94, Page 50, and 11.01.93, Page 62). And it wasn't original with either of us; Windows NT and Windows 95 have registries, and other OSes have similar mechanisms, although none I know of provides an exact model for what I think the Mac needs.

A graphically oriented registry would address an important challenge: how to update the OS reliably in a world where the matrix of hardware and system software possibilities is already unmanageably large — and soon to become much more so, thanks to OpenDoc and the PowerPC Platform.

Implementing the idea would require valuable resources, but I'll wager it would quickly pay for itself — even if you don't factor in customer satisfaction — by reducing the engineering and technical support burdens associated with future system updates.

Several non-U.S. readers have written to add another dimension to the picture: Apple currently has to rewrite its installer scripts for every language it supports. If as part of this new registry it gave each version of each system component a unique identifier, U.S. scripts could be "translated" far more promptly and economically.

The user in control

Aside from simplifying updates, the registry as I envision it would offer users another major benefit: a user-friendly window on the undocumented dependencies that now make our systems so mysterious. If the idea were implemented well and supported by third-party developers, it would finally enable users to see what system components each application requires and, conversely, what applications require any given component. (Wouldn't it be nice to know — ideally from within the Extensions Manager — what you're breaking when you turn off some obscure component?)

What's really at stake here is the fundamental value that has defined the Mac since Day One: putting the user in control. The platform still comes closer to this ideal than any other, and that remains Apple's key advantage as it struggles to clarify its mission and, more mundanely, to defend its market share, particularly in the home, school and small-business segments.

The competition is very aware of this issue. With its latest buzzword — SIPC, for Simply Interactive Personal Computer — Microsoft Corp. has put usability at the top of its agenda. Apple can't afford to rest on its tattered laurels. A registry may or may not be the solution, but the problem is all too real. □

Henry Norr, editor emeritus of MacWEEK, welcomes feedback in the MacWEEK forums on CompuServe or at henry_norr@macweek.com.

LETTERS

OS/2 is alive and well

I read with interest James Staten's column in MacWEEK (03.11.96, Page 3) asking for IBM Corp. to come to Apple's rescue. He makes some good points about IBM's ability to push the Mac OS onto corporate PowerPC desktops. But I think he is quite mistaken on a couple of points regarding OS/2.

Yes, OS/2 for the PowerPC has been halted for now; the reasons for this may bode poorly for PowerPC on the desktop, but bode very well for OS/2 in general. The popular myth that OS/2 is "floundering" is simply not supported by the facts — facts seldom reported in the mainstream press.

OS/2 Warp's sales are going through the roof. OS/2 Warp's sales continued to accelerate after the release of Windows NT 3.51 and Windows 95. It outsold Windows NT in 1995 by a factor of more than six. While native Windows NT applications number around 100, OS/2's native application base continues to grow.

These are not the signs of a floundering OS, any more than the Mac OS is floundering. IBM pulled its finite OS/2 development resources from OS/2 for PowerPC to concentrate its effort in the market where it is already taking on Microsoft Corp. and is often winning — Intel.

Larry Bouthillier
Audio engineer/media specialist
Harvard University Production Services
Cambridge, Mass.

Energy savings add up

Your article on the Environmental Protection Agency's Energy Star program, despite its negative tone, demonstrates exactly why a program like Energy Star needs to exist (03.25.96, Page 39). The fact that one interviewee had "never heard anyone at his company mention the importance of Energy Star" and that another stated "the people responsible for paying the power bill are not the ones responsible for buying the machine" are indications that the power-saving innovations promoted by the program would not have occurred without Energy Star.

The savings from Energy Star equipment may be small for individual users, but they are large in the aggregate. We just completed a major study on energy use in office equipment, one component of which was an assessment of the likely future effects of the Energy Star program. This study found that the savings from the program for all affected office equipment will total more than $1 billion annually after the year 2000. In my opinion, any government program (such as Energy Star) that saves billions of dollars for a one-time expenditure of a few million dollars is robustly cost-effective. For readers interested in the executive summary to our report, it can be accessed at http://eande.lbl.gov/EAP/EUF/oeexesum.html.

Jonathan G. Koomey, staff scientist
Energy Analysis Program
Ernest Orlando Lawrence Berkeley (Calif.) National Laboratory

Don't forget UserLand

Your guide to Web management was welcome, but Michael Miley's article "Good interactive sites take time, hard work" (04.01.96, Page 32) suffered from one glaring omission. In the section on CGI (Common Gateway Interface) scripting, we're informed that CGIs for WebStar "can be written in any language, including C, C++, AppleScript, MacPerl and HyperCard."

Why no mention of UserLand Software Inc.'s Frontier Version 2.0b2? A cursory survey of CGI-intensive Mac Web sites and related Internet discussion groups would reveal that Frontier's language is considered the tool of choice for CGI scripts by most WebStar gurus. In fact, Mitzi Waltz's case study of the Salon Web site (Page 36) refers to its use of Frontier CGIs.

Frontier is multithreaded, Power Mac-native, with built-in support for WebStar and many TCP/IP protocols. It is the center of a thriving on-line community committed to building and sharing Macintosh Web tools. Plus, Frontier is free — it can be downloaded from: http://www.hotwired.com/People/Staff/userland/aretha/.

Brad Cahoon, University of Georgia
Center for Continuing Education
Athens, Ga.

Cyberdog is cool

Jon Hendry's letter (03.18.96, Page 27) complaining about the name Cyberdog is a perfect exhibition of a technological (generational?) gap. It's obvious he can't see the coolness of such a name given the name of his own company. Steel Driving Software Inc. evokes images of mindlessly motive 19th-century technology. Interesting? Ride those rails and you're not visualizing going anywhere but where SDS takes you.

D. Wally
Raleigh, N.C.

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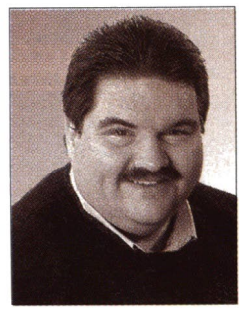
THE MAC MANAGER DON CRABB

Apple should save its breath, bucks on AOCE

I was a fan of PowerTalk from the start. The promise of collaboration and communications prowess built into the Mac OS was seductive.

I can recall gushing about it as if it were only yesterday: "In developing PowerTalk (and its server, PowerShare) Apple realized that for you to get all the advantages of Mac-based collaboration and communications, electronic-mail services needed to be integrated directly into the operating system and gathered from different sources into a single desktop mailbox. The result is a unified PowerTalk mailbox and a simple mail utility, AppleMail."



And if the implementation of PowerTalk and PowerShare had been as good as its theoretical conception, I would not be writing this column today.

Sadly, of course, PowerTalk and PowerShare are failures. Big time. They are slow, glitch-laden and RAM hungry; they require expensive and often complicated gateways to be of any use and lack an AppleMail worthy of the name. And they don't work well with the latest Mac OS, System 7.5.3.

In fact, Apple tells us: "PowerShare has not been tested and is not supported with System 7.5.3. In addition, there are known incompatibilities between PowerShare and Open Transport 1.1. ... Apple strongly recommends that you do not update a PowerShare server to System 7.5.3 with the System 7.5 Update 2.0."

Get the picture?

PowerMumble

PowerTalk, of course, has never lived up to its billing. And it's time that Apple cut its losses. Its official story (see http://www.macos.apple.com:80/macos/smart/communications/c_c/c_c.html and make sure to follow all links) still says that prior to Copland it will publish a PowerTalk mail API to help create rules-based e-mail as well as provide tighter integration with eWorld. Oops!

Despite the nonexistent API and the death of eWorld, Apple also continues to tell us that Copland will include PowerTalk 2.0.

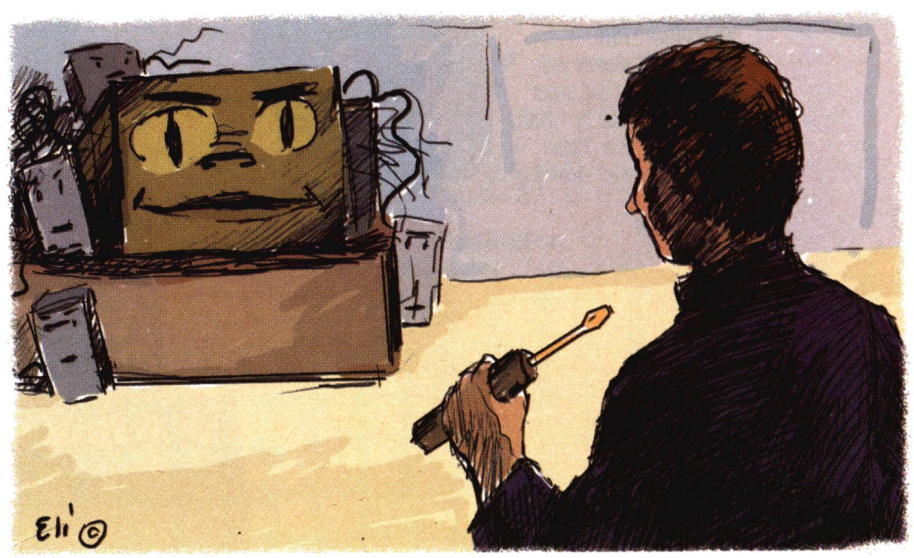
Collaborative reality

Again, we'll delete eWorld from its list. But even if we added CompuServe, America Online and Prodigy, the bottom line would be the same: PowerTalk and PowerShare are a big waste of Apple's development time and money.

The world has moved far and fast since Apple first articulated its AOCE (Apple Open Collaboration Environment) strategy and architecture at the beginning of the decade. Such things as the Internet, intranets and the Web, not to mention OpenDoc, Open Transport and Cyberdog, have come along, all of which add up to a collaboration and communications model far different from what Apple first articulated with AOCE and System 7.5, Release 1.

So, where does this leave PowerShare and PowerTalk? Out to pasture, I'm afraid. While it might be possible and desirable to salvage parts of them for Copland (such as DigiSign and a real universal mailbox), it's also time to dump the rest. Put that development effort instead into figuring out how Apple and the Mac OS can offer unique collaboration and communications solutions in the network-centric world of today. □

Don Crabb welcomes comments at his Internet address decc@cs.uchicago.edu. You can also check out his home page at http://cs-www.uchicago.edu/~decc/.



Suddenly the young IS Jedi came face to face with Jabba the Hub.

Comments? Ideas? Contact Eli at elitoons@aol.com

Super Stars

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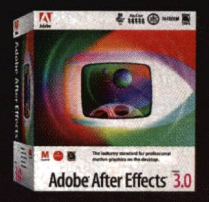

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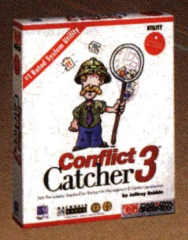

Manage start-up files and identify conflicts to help your Macintosh run smoothly. Conflict Catcher 3 also manages control panels, extensions, fonts and menu items.
SRP $100

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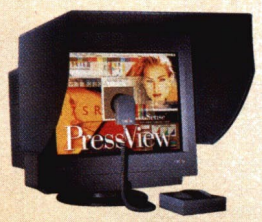
SRP $239.95

Best New Display

Radius
PressView 17SR



The only 17" display with reference color and super resolution (1,600 by 1,200), it also features a .25mm aperture grille for incredible sharpness.
SRP $2,399

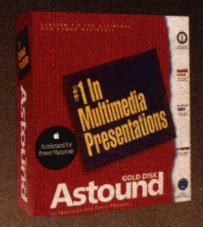
Best New Page Design Product

Adobe Systems
PageMill 1.0

Create and edit pages for the World Wide Web in a familiar word processing program that translates your work into HTML. Applying styles, placing images and linking elements is easy with this revolutionary software.
SRP $149

Best New Business Communications Application

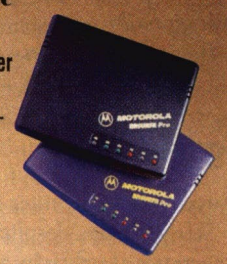
Gold Disk
Astound 2.0



Built-in multimedia effects and 70 pre-designed templates let you create impressive on-screen presentations, overheads and more in minutes. Astound 2.0 is now optimized for Power Macintosh.
SRP $249.95 Competitive Upgrade SRP $99.95

Best New Communications Product

Motorola
BITSURFR Pro ISDN Terminal Adapter



Access the Internet, work from home or a remote location, conduct a video-conference or make a LAN-to-LAN connection. BITSURFR Pro also supports caller ID, three-way calling, call forwarding and call waiting.
SRP $495

Best New Display Card

Radius
Thunder 30/1600

Super resolution and dynamic speed are just two of the features of this hot graphics card. Dynamic Desktop and ColorComposer software are included.
SRP $1,499

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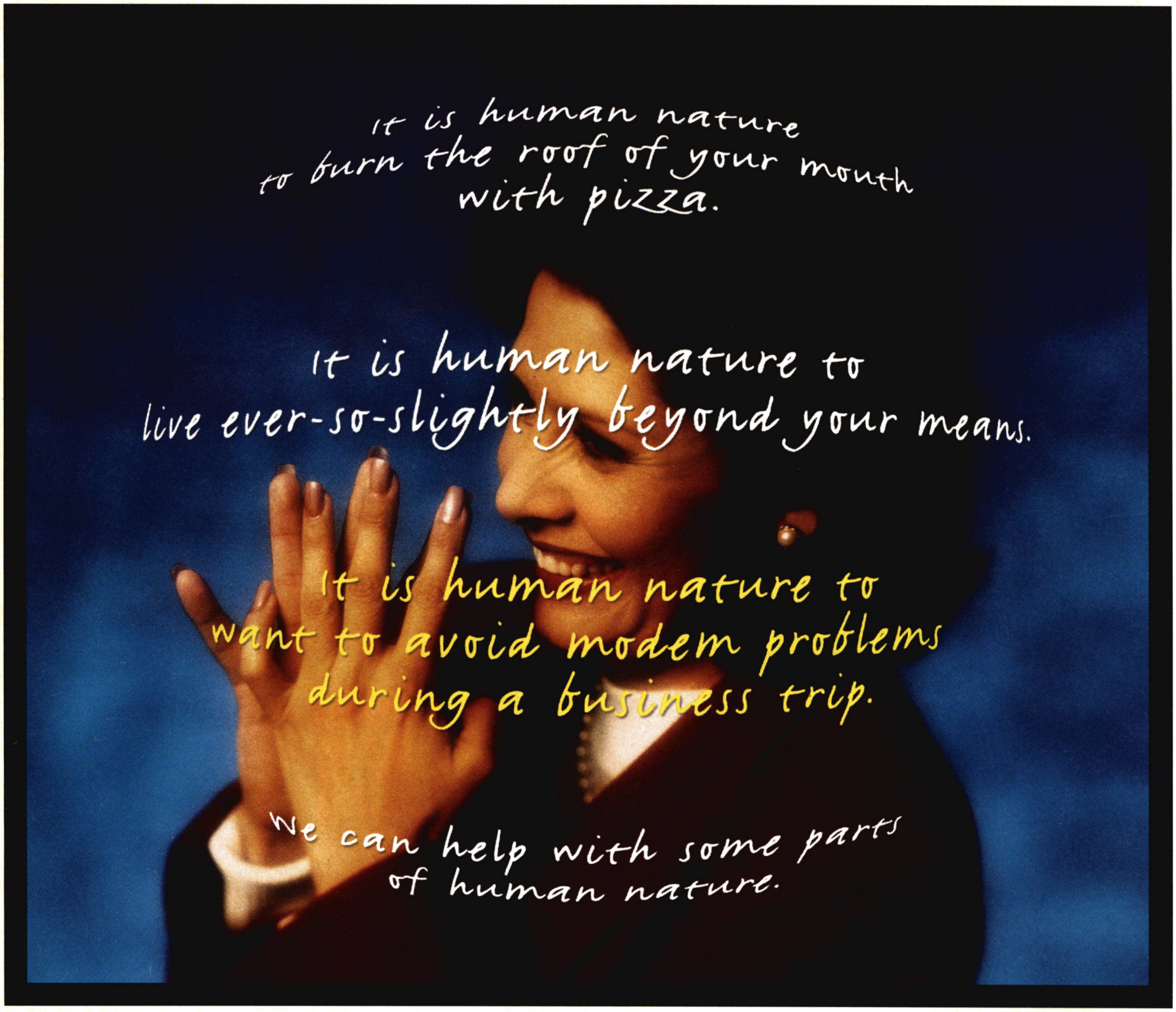
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to burn the roof of your mouth
with pizza.
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SDK FOR FREE

A software developers kit for WebArranger 2.0 (see review, Page 42) can be downloaded from http://www.cesoft.com.

Insignia starts up Mac users with SoftWindows 95

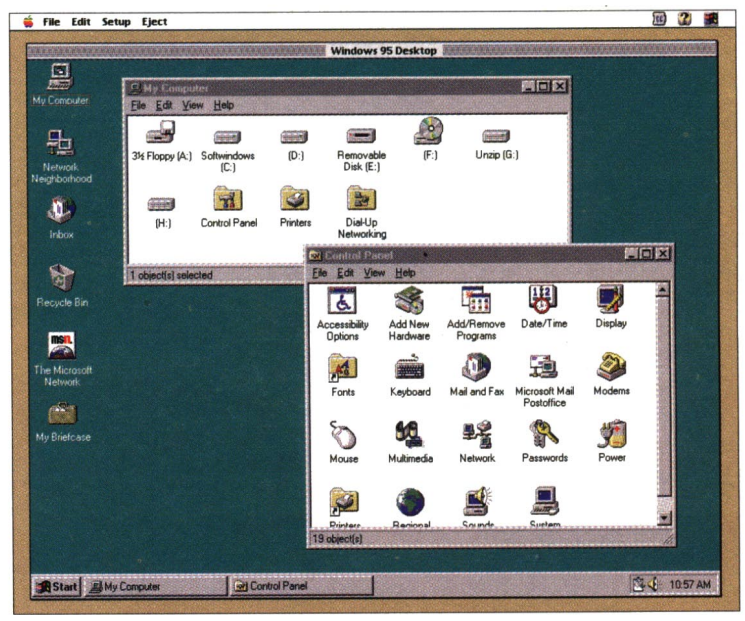
By Jonathan A. Oski

For casual use of Windows 95 applications on a high-end Mac, this is a solid buy.

For all the Macintosh users who have waited patiently since last August with their "Tattoo You" discs cued up, the wait is over. Insignia Solutions Inc., the company determined to prove that the Mac can offer the best of both worlds, recently released SoftWindows 95, the third generation of its Intel-standard PC-emulation software for the Mac.

In addition to being optimized to run Windows 95, the $379 SoftWindows 95 includes several substantial improvements. A new display driver is faster and allows you to resize the Applications window without restarting SoftWindows. Gamers and users of multimedia titles will appreciate the fully functional SoundBlaster support. Improved printing allows you to take full advantage of Mac printer capabilities (such as color) from within Windows applications. Support for PC SCSI peripherals and PC Cards is also included in this release.

One notable new feature is the TurboStart option. TurboStart cuts program load time dramatically by saving your current working environment so that when you relaunch SoftWindows 95, all the applications and documents that were loaded will already be open. (You miss the soothing Windows start-up sound and accompanying blurry picture of clouds.) Using the TurboStart option with a couple of Microsoft Office 95 applications open, you can shorten the start time to less than a minute on 604-based Macs or about 90 seconds on 603-based Macs. This is significant, since even the fastest PC we could find could not load Windows 95, Excel and Word in less than four minutes.



The Windows 95 desktop, or Explorer shell, is a vast improvement over the Program Manager. While it isn't the Finder, Mac users should find it much easier to work with PC disks and CD-ROMs via Insignia's SoftWindows 95 by virtue of its resemblance to the Mac.

An Office solution

Insignia sees SoftWindows as a viable alternative for Mac users who are frustrated by Microsoft Corp.'s lackadaisical attitude toward the Mac. With Office 95 and perhaps Word 7 and Excel 6 nowhere in sight for Mac users, SoftWindows 95 offers you a way to use these applications, in spite of Microsoft.

We tested Office 95 under SoftWindows 95 on a PowerWave 604/150 from Power Computing Corp. and were pleased with its performance. While we could not envision using it day in, day out, it was suitable for casual use throughout the course of a day. In the back of our minds, though, we did not like the idea of caving in to Microsoft and living on its terms. While SoftWindows 95 represents a viable alternative, if Microsoft applications were our bread and butter, a better choice would be just to switch to an Intel-based workstation.

Network options

SoftWindows 95 builds on Version 2's networking enhancements (see 10.02.95, Page 29). There is now built-in support for NetWare 4.x clients and Microsoft LAN Manager. More significant is the capability to share information with other Windows 95 clients on your network. Network protocol support still involves a bit of manual editing of some configuration files from within a DOS window, but the Windows 95 Network control panel makes the final steps of the configuration much easier. During our tests, we were able to connect to both Windows 95 clients and Windows NT servers quite easily using either TCP/IP or NetBEUI.

See SoftWiindows, next page

score card

SoftWindows 95

Insignia Solutions Inc.
List price: $379*
Overall value ◆◆◆◆

Insignia has once again demonstrated its technical wizardry with SoftWindows 95, an application that can transform a Mac into a PC running Windows 95. The upgrade, which demands considerably more RAM and disk space than previous releases, improves performance; broadens network and printing support; and adds TurboStart, a marvelous feature that dramatically speeds start-up time for frequently used Windows applications. SoftWindows 95, like previous releases, runs well only on high-end Macs. It is noticeably poky on any Mac without a Level 1 or Level 2 cache and works best on high-end PCI Macs. If you have a good enough system and need to occasionally run Windows titles, SoftWindows 95 is a very good buy. For more demanding, speed-intensive Windows work, though, you'll want to either invest in a hardware solution or just bite the bullet and buy a PC.

Performance ◆◆◆
Features ◆◆◆◆
Ease of use ◆◆◆◆
Documentation/support ◆◆◆

Upgrades from Version 2.0, $149.

Key ◆◆◆◆◆ *Excellent* ◆◆◆◆ *Very good* ◆◆◆ *Good* ◆◆ *Fair* ◆ *Unsatisfactory*

COMPARISON

xRes 2.0 gets serious; Live Picture 2.5 revs up

By Bruce Fraser

Macromedia transforms xRes into contender; Live Picture gets performance, feature boost.

When Mac users think image editing, they think Adobe Photoshop. But one oft-heard lament is the amount of RAM it needs to edit large images at reasonable speed. Here we look at two applications that address that problem in different ways: Live Picture 2.5 and xRes 2.0.

Both have new publishers: Live Picture Inc., the original developer of Live Picture, has taken it back from MetaTools Inc., while xRes' developer, Fauve Software Inc., has been acquired by Macromedia Inc.

In the process, Live Picture has changed very little — Version 2.5 is an incremental, if solid, upgrade — but xRes has undergone a radical and much-needed transformation.

Both programs let you manipulate large images with relatively low RAM configurations, but the resemblance pretty much ends there.

Aimed at high-end creative workers, the $995 Live Picture 2.5 is designed to complement Photoshop rather than compete with it. In contrast, xRes 2 (estimated street price, $489) is a complete image-editing and natural-media painting application that will inevitably end up competing

See Comparison, Page 38

SoftWindows

From previous page

Support for Banyan Systems Inc.'s Vines is unclear at this point. Though configuration is covered in the manual, neither we nor Insignia could get Vines client software working under SoftWindows 95. This is especially disappointing in light of the fact that Banyan no longer requires its proprietary protocol and can use the Microsoft TCP/IP stack.

Requirements

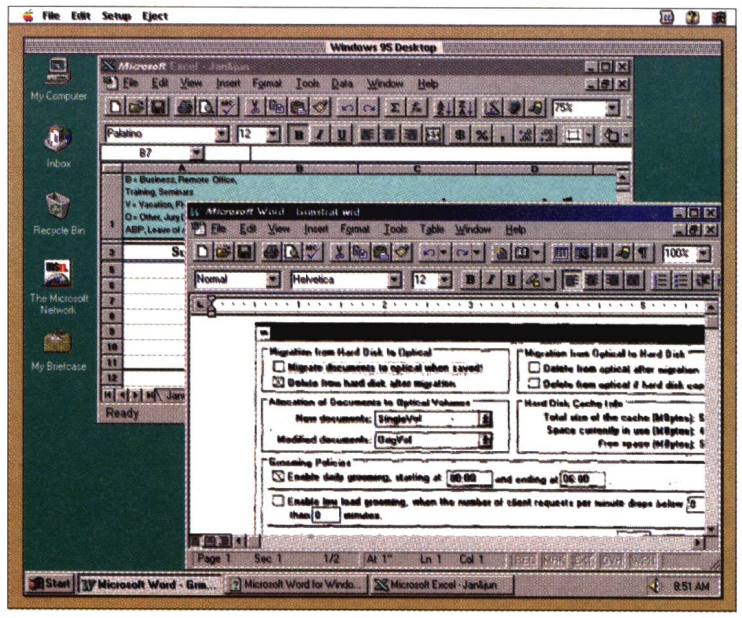
SoftWindows 95 requires significantly more memory and disk space than earlier versions. Insignia recommends 16 to 20 Mbytes of RAM and 140 Mbytes of disk space. Based on our experience, the more RAM you allocate to SoftWindows 95, the better the performance. For example, we used a 24-Mbyte application partition on our PowerWave 604/150 to minimize the need for virtual memory. Windows applications tend to consume more disk space as well, so you should plan on allocating 200 to 300 Mbytes of disk space for SoftWindows partitions if you plan to install more than a small collection of Windows 95 applications.

Like Version 2, SoftWindows 95 requires a Power Mac, and it seems unlikely that Insignia will release a 68040-based version.

Fast enough?

Since Version 1, we have been impressed with the technical feat Insignia has pulled off with SoftWindows. Its performance, however, has been lackluster and has limited the acceptance of the product.

Although SoftWindows 95 is noticeably faster than Version 2, the latest update fared poorly during our benchmark testing against a variety of 386- and 486-based PC clones. Disk performance was higher than that of the 386-based model, but we would expect this because of the presence of a Seagate ST12550N 2-Gbyte drive in the PowerWave 604/150. Graphics performance was only about 20 percent to 25 percent of the 386 workstation and significantly less than the 486-based clones. Again, however, our use of the product did not correlate with the benchmark results, as we found SoftWindows 95 to be very usable on the PowerWave, whereas Windows 95 is barely usable on a 386-based PC and merely tolerable on a low-end 486-based PC.



If you're afraid of being left behind by Microsoft's apparent lack of commitment to the Mac, use SoftWindows 95 to run the latest incarnations of Microsoft Office on your Mac. Office 95, which includes the latest versions of Word, Excel and PowerPoint, ran well on a high-end Mac in the SoftWindows 95 environment.

In character-mode DOS emulation, SoftWindows' performance is good enough to be well-suited for casual use. With Window 95, the character mode is gone and all operations use the new Microsoft Explorer shell. On a very fast Mac with ample RAM and disk space, such as our PowerWave 604/150, we would have no trouble using SoftWindows 95 to perform some tasks on a daily basis.

We had much more disappointing results, however, when we tried to use SoftWindows on 603- and 601-based Power Macs. Program loads, window redraws and menu operations were sluggish, giving users the feeling that they were trying to use Microsoft Word 6.0 on a Mac IIsi.

Given this, we would recommend no less than a 100-MHz 601-based Power Mac with Level 2 cache and 32 Mbytes or more of RAM. The program certainly makes use of Level 1 and Level 2 cache; their absence on some of the machines we tested noticeably affected performance.

Documentation and support

As with the previous release, we found SoftWindows 95 documentation to be a bit sparse. It does a good job of covering the basics in terms of installation, configuration and use of the application, but does not go into any detail about the Windows 95 environment. Since the target audience is apt to be unfamiliar with the nuances of Windows, Insignia should include a Windows 95 user guide or some kind of introductory book on the operating system.

SoftWindows 95 includes 30 days of free technical support. Beyond that, users will need to decide between $25-per-call incident-based support or $109-per-year Premier support. We found Insignia's technical support staff to be both knowledgeable and courteous. They had obviously prepared for the release of this product and were able to answer all but our most difficult questions immediately. We also found the fax-back service to be a good source of additional information for specific networking configuration questions.

Conclusions

Insignia continues to impress us with its ingenuity in this latest release of SoftWindows. Given the right platform, it offers the least expensive way to achieve some degree of parity with the Windows-Intel world. The biggest advantage of SoftWindows is economics: You need not buy dedicated RAM or populate a PCI or NuBus slot to use the program. If blazing fast speed in the Windows 95 environment is what you are looking for, however, you should just buy a PC or invest in one of the hardware-based alternatives. But as we've concluded previously, if you have an occasional need to run Windows 95 applications or multimedia titles, SoftWindows 95 should be more than adequate on higher-end Macs.

Insignia Solutions Inc. of Santa Clara, Calif., can be reached at (408) 327-6000 or (800) 848-7677; fax (408) 327-6272; fax-back (800) 876-3872; maccs@isinc.insignia.com; http://www.insignia.com. □

MACWEEK WINBENCH 95 LABS

SoftWindows 95

SoftWindows 95 fared poorly in our graphics benchmarks against 386- and 486-based Intel PC clones but held its own in disk testing. Despite the lackluster results, though, the program did not feel slow.

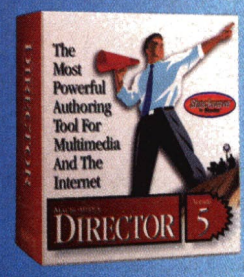
Graphics Performance

Graphics WinMark95	Longer is better	Index
PowerWave 604/150		0.30
Gateway 2000 386/33C		1.31
Gateway 2000 486 DX2-33V		2.55
Gateway 2000 486 DX2-66V		2.36

Disk Performance

Disk WinMark95	Longer is better	Index
PowerWave 604/150		189
Gateway 2000 386/33C		156
Gateway 2000 486 DX2-33V		207
Gateway 2000 486 DX2-66V		231

Test configuration: The 150-MHz 604-based PowerWave had 48 Mbytes of RAM, with 24 dedicated to SoftWindows 95; an ATI Mach64 PCI display adapter; and a Seagate ST1520N 2-Gbyte Fast SCSI-2 disk drive. The 33-MHz 386 had 8 Mbytes of RAM, a Diamond SpeedStar display adapter and a Western Digital Caviar 2120 IDE disk drive. The 33-MHz 486 had 16 Mbytes of RAM, an ELSA Winner 1000 display adapter and a Western Digital Caviar 2250 IDE disk drive. The 66-MHz 486 had 16 Mbytes of RAM, an ATI Mach32 display adapter and a Western Digital Caviar 2250 IDE disk drive.



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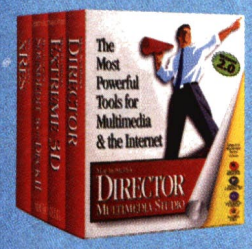

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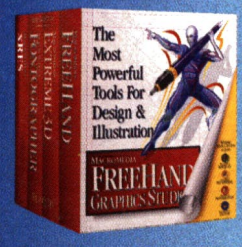

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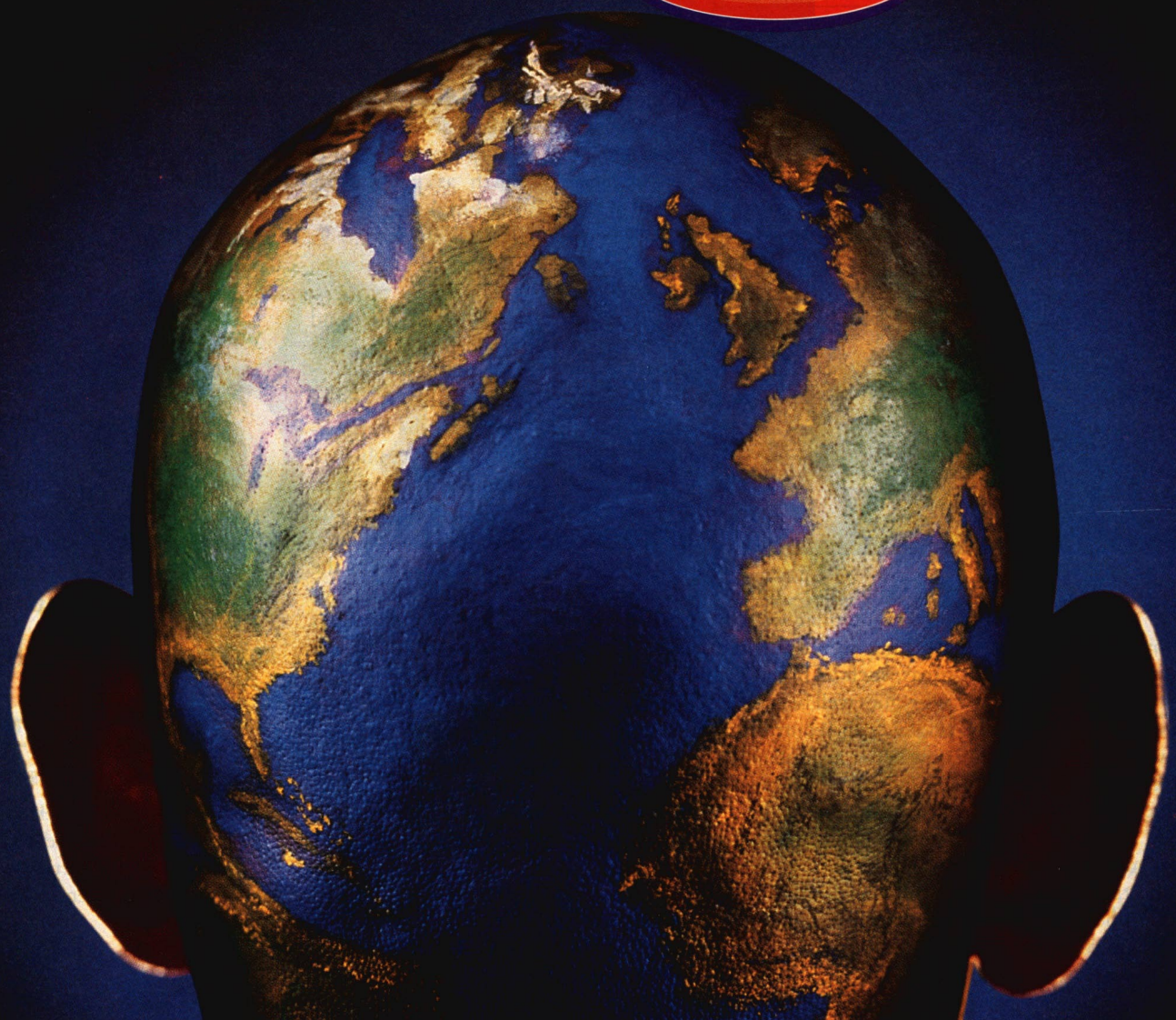

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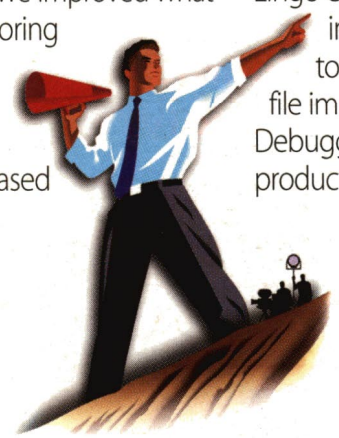

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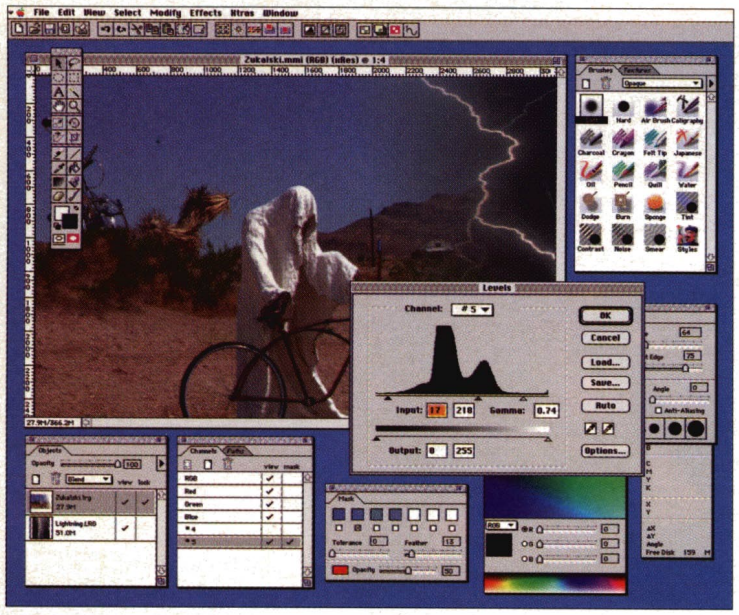

Macromedia xRes 2's revamped interface features tabbed, groupable palettes reminiscent of those in Photoshop. While the Levels dialog box looks and works like Photoshop's, here it's modifying a channel used to mask the active object rather than the object itself.

Comparison

From Page 35

head-on with Photoshop and Fractal Design Corp.'s Painter.

xRes 2 represents a serious comeback after the disastrous xRes 1.0 (see 02.06.95, Page 30) and the follow-up bug fix, Version 1.11 (see 05.22.95, Page 35). Version 2 is a whole new ballgame, with a new and much more Mac-like interface. The palettes have been pared down to a more manageable number, and they are tabbed and can be grouped like Photoshop's, so screen clutter is reduced. The dialog boxes also look and act more consistently.

X marks the spot

The impetus behind this upgrade was not to add new features, but to turn the program into a smoothly functioning and coherent whole, and to a large extent the effort has been successful. Many of the tools and commands mimic Photoshop's, so anyone familiar with the latter can start working in xRes quite easily. In some areas, such as brush control or masking, xRes goes well beyond Photoshop in terms of power and control, but these features are now better assimilated.

One major change is that xRes now offers two distinct working modes, Direct and xRes. In Direct mode, the program acts as a straightforward pixel-based image editor. All the pixels are loaded into memory (or scratch disk space), and you operate on them directly, with no post-processing required. In xRes mode, a pyramid-sampling scheme handles large files (you need to convert large images into the proprietary .LRG format), which works by operating only on the pixels you can see on the screen. The actual operations are stored as a command list and are carried out on the high-resolution data when you export a finished file.

Working efficiently in xRes mode requires much more planning and forethought than working in Direct mode. You must understand and plan for the differences between pixel-based and command-based operations. Pixel-based operations (such as painting, applying filters and masking) execute at the same speed no matter when in the work flow they occur. The speed of command-based operations (such as transformation, zooming, panning, cloning and rendering) depends largely on the number of pixel-based operations that have previously been applied to the displayed pixels. For example, resizing a new object is very quick, but resizing the same object after applying several filters is much slower.

> Macromedia xRes 2.0 is still a much less mature product than Adobe Photoshop, but it's starting to look like a serious contender.

If operations that are command-based have slowed to a crawl, you can use the Render command to render the whole document, or the Render Object command to render a single object. This applies all the pixel-based operations to the pixel data, so command-based operations are no longer slowed down, but the rendering process can take a long time — you're simply shifting some of the rendering time from the post-processing phase so that you can work more quickly once it's done.

Learning to work efficiently in xRes mode simply involves learning which operations slow things down and planning your projects accordingly. If you do so, it's possible to work quite quickly even on very large images without loading your Mac with huge amounts of RAM. You will, however, need huge amounts of disk space (we needed more than 400 Mbytes of scratch space when compositing two images of about 30 Mbytes each), and plan on having your Mac tied up for lengthy post-processing times.

xRes offers more brush control than any other application we've seen. Along with the wealth of natural media brushes and the usual controls, the program lets you set parameters to respond to pressure sensitivity and speed, and to control flow rate, texture, smoothing, spacing, bleed, fringing and other effects depending on the type of brush chosen.

The program's masking features are also noteworthy. A Mask palette lets you set up to seven colors to be masked and offers tolerance and feathering controls. You can create a mask using the brush, in which case you can vary the tolerance and turn mask colors on and off to get the desired effect, or you can use the Auto mask command, which looks at the colors and tolerance value in the mask palette and creates a selection based on them. This approach provides substantially more control than Photoshop's Color Range command, the closest equivalent it offers.

Macromedia has done a very nice job of polishing a diamond that was distinctly rough the last time we looked at it, but the job isn't finished yet. The documentation is rather spotty and the program displayed some nonrepeatable quirks. Still, xRes 2 is starting to look like a serious Photoshop contender — the first we've seen in a long time.

Live from Soquel, it's Live Picture

The overall look and feel of Live Picture 2.5 has changed very little despite the change in publishers. Like xRes, Live Picture uses a proprietary image format to display very large images quickly at any zoom level. All image operations are stored as mathematical descriptions in a small FITS file, and are applied to the high-resolution image data in a post-processing step called Building. But Live Picture differs from xRes in several important ways.

Live Picture's resolution-independent nature has been the subject of a great deal of hype. It doesn't violate the laws of physics — scanned images are made up of pixels, and if you zoom in far enough with Live Picture, you'll see pixels in the scans. There's no such thing as a resolution-independent image. But objects created in Live Picture — paint strokes, gradients, type, paths — are genuinely resolution-independent. You can

See Comparison, Page 40

When converting paths to a mask or a stencil, Live Picture 2.5 offers a new option, Extra Precision, which together with Create Hard Edge makes precise hard-edged stencils or masks. It's useful for masking Monocolor or Multicolor layers with paths from type.

score card

Large-file, modest-RAM image editors

xRes, an all-around imaging program, includes features for working with large files; Live Picture excels at compositing and manipulating high-resolution images. Live Picture 2.5 is a solid, but minor, upgrade while xRes 2.0 has undergone a radical and much-needed transformation.

- **Live Picture** from Live Picture Inc. is still very much a tool for pros. Version 2.5 supports ColorSync and EPS graphics imports and reduces the minimum RAM requirements. FastEdit IVUE, a Photoshop plug-in that lets you open sections of IVUE files for editing in Photoshop, integrates the two programs to a far greater extent than previously possible. The remaining changes are subtle performance enhancements or minor tweaks, but they make an already stellar performer even better.
- **xRes** from Macromedia Inc. is a very creditable upgrade to this ambitious image editor. Version 2 sports a much smoother and more consistent user interface, a less confusing feature set and some worthwhile performance and stability enhancements. It's still a much less mature product than Photoshop, but it's starting to look like a serious contender.

	Live Picture 2.5	xRes 2.0
Overall value	◆◆◆◆	◆◆◆◆
List price	$995*	$489**
Performance	◆◆◆◆	◆◆◆◆
Features	◆◆◆◆	◆◆◆◆
Ease of use	◆◆◆	◆◆◆
Documentation/support	◆◆◆◆	◆◆

**List price; Upgrades from previous versions, $149.95*

***Estimated street price. Upgrades from previous versions, $99. Competitive upgrades from Photoshop, Live Picture or Painter, $199.*

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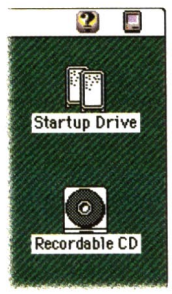

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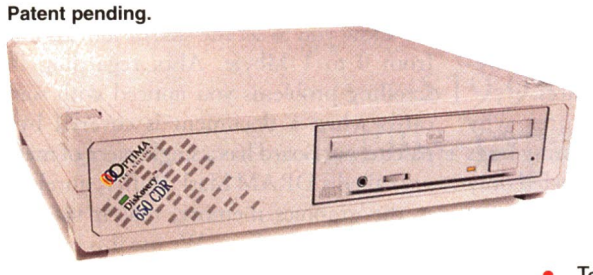

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Comparison

From Page 38

blow them up and build them out to any size. With images, you can achieve the illusion of resolution independence by starting out with very large high-resolution scans — Live Picture handles them fast enough to make compositing images as large as several hundred megabytes a snap even when the program is using the new 18-Mbyte minimum RAM requirement.

In general, the kinds of operation you typically want to carry out at the pixel level — such as removing dust and scratches — are better done outside Live Picture. When you register Version 2.5, you get a copy of FastEdit IVUE, a Photoshop plug-in that lets you open sections of IVUE files for editing in Photoshop. This lets you bounce almost seamlessly between Photoshop and Live Picture, getting the best of both worlds.

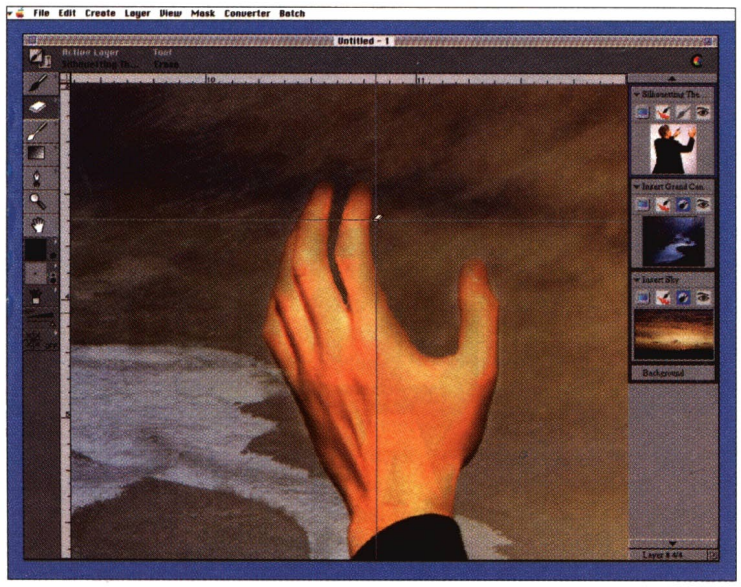
Live Picture excels in operations you carry out on entire images. In Positioning mode, you can either drag or numerically position, scale, rotate and crop an image in a few seconds. The speed with which you can arrange huge scans in the work space is unparalleled by any other Mac application. In Creative mode, you can silhouette, ghost, distort and colorize images in near-real time. Version 2.5 is considerably snappier than its predecessor, even with the reduced RAM requirements. Delays in switching tools are now almost completely eliminated, and the screen redraw is faster, too.

Live Picture 2.5's new features are modest but welcome. A new layer type, EPS, lets you import text and graphics in EPS format, so you can integrate Adobe Illustrator or Macromedia FreeHand documents into your compositions. You can apply geometric transformations such as scaling, rotation or skewing to an EPS layer, but you can't use perspective distortions or control the opacity.

You can, however, use the path tools to create a path, then convert it to a stencil and use it to clip the EPS layer. Files containing EPS layers should be exported to EPS DCS format at build time — if you build a TIFF or a Scitex CT file instead, the output uses only the low-resolution preview for the EPS layer. When you export as EPS DCS, the PostScript data is used instead.

Live Picture 2.5 supports ColorSync in several ways. You can set the output to use a color space defined by a ColorSync profile, or even build a file that simulates your final output device on a proofer. You can use ColorSync to display images accurately, or to create a soft proof on your monitor based on the specified output device. You can also use ColorSync to provide a gamut warning.

Version 2.5 supports Photoshop-compatible plug-in filters. You can apply a filter to a single layer or to an entire composite. If you apply a filter to the latter, you can use an image or a monocolor layer as a mask through which the filter is applied. Applying filters to complex images can be agonizingly slow, but you can achieve some dramatic effects — it just helps to know ahead of time what you're trying to achieve. We mention this mainly because it goes against the main thrust of Live Picture, which is to provide enough interactivity to encourage experimentation.



Live Picture 2.5 looks virtually identical to its predecessor. The new features, such as ColorSync support, are mostly under the hood, so existing users will find the upgrade very easy to use. For new users, the learning curve is essentially unchanged.

Two new commands appear in the Mask menu: Use As Alpha Channel and Remove Alpha Channel. The former lets you use a designated layer as an alpha channel for the entire composite. When you build the composite to an IVUE or TIFF output file, you can include the alpha channel. A further enhancement to masking is found in the Path->Mask and Path->Stencil commands: A new option, Extra Precision, is available when you create a hard-edged mask or stencil. It improves the rendering of masks or stencils from type paths considerably.

One other nifty feature of note is Live Picture's capability to "learn" color separations from other programs. A file called LP RGB Target is included on the CD. You can feed it through any separation program you like, then open the result in the LP TableMaker utility. It will then create a separation table that Live Picture can use during the build process. We haven't tested this capability extensively yet, but the results we've obtained look encouraging.

Conclusions

Live Picture 2.5 is a modest improvement over its predecessor — we'd hoped by now that we'd be able to zoom in while silhouetting images, but aside from that, all the feature requests we made when we reviewed Live Picture 2.0 (see 05.08.95, Page 25) have been honored. Anyone hoping to be surprised and delighted by this upgrade may be a little disappointed, but the performance enhancements and new features are solid improvements to an already great package.

Clearly xRes 2 isn't a Photoshop killer — yet. It doesn't have the latter's degree of maturity, and it lacks some important features such as video LUT (look-up table) animation for real-time feedback on color and tone correction. Despite the amount of thought that has obviously gone into the color engine, xRes' developers seem unaware of dot gain. But xRes has come a long way in a relatively short time. It's now a very useful addition to the digital imager's toolbox, and it should give Photoshop some welcome competition.

Live Picture Inc. of Soquel, Calif., can be reached at (408) 464-4200 or (800) 724-7900; fax (408) 464-4202; http://www.livepicture.com.

Macromedia Inc. of San Francisco can be reached at (415) 252-2000 or (800) 989-3762; fax (415) 626-0554; http://www.macromedia.com. □

reviews FORUM

Caveat emptor

Thank you for clarifying the on-line financial services issue regarding Intuit Inc.'s Quicken 6. As stated in your review (see 03.11.96, Page 30), the advertising enclosed with the software listed my bank and several others, as though I only needed to call them and tell them to "turn it on." How aggravating! To make matters worse, Intuit's tech support staff was unaware of any holdup and told me the service was working.

My bank told me in early December that the service would be operable in early January. By mid-January, I gave up. The bank now says that it will not be supporting the Mac.

One of the most challenging aspects to checkbook reconciliation via Quicken is tracking posting date differences between its register and the bank statement. Downloading transactions would solve this elegantly. I really looked forward to this feature.

Barry Christopher, owner
Entity Productions, New York

For the record

In our review of PCI graphics accelerator cards (04.01.96, Page 41), we misstated the capabilities of OpenGL. It does support texture mapping and transparency.

Accentuate the positive?

While your Quicken 6 review is not truly inaccurate, it certainly dwells very much on the negative. No mention was made of the revolutionary new investment portfolio view or the cool new budget features. No mention was made of how performance was improved over Quicken 5, nor of the new flexibility added to the reports functions. There was only passing mention made of the awesome new Apple Guide help features.

With all these cool new features, why did you dedicate space to mentioning bugs that, by your own admission, affected only a few customers? Give us a break please. Your review was biased and incomplete.

Allen Prescott
Quicken Mac engineering, Intuit Inc.
Mountain View, Calif.

Imagine all the features

As a quick aside to your PCI graphics accelerator card review (see 04.01.96, Page 41), you failed to mention some key points about Number Nine Visual Technology Corp.'s Imagine128 card. The card, with sufficient memory, supports 1,600-by-1,600 true color, which is one of the few cards I'm aware of that has this capability. It uses a true 128-bit wide internal data bus for speed. My understanding is that the Radius card internally splits the data path in half. Finally, it supports multiple cards per CPU. Otherwise, great review!

Matt Domenici, consultant
Bedford, Texas

Number Nine speaks

Thanks for the great review of the Imagine128 card. We hope it wasn't an April Fools' joke. I wanted, however, to bring up a couple of points. In the review you say that Number Nine has a font-caching scheme that uses a small portion of memory on the board. This is an error: We use main system memory to do this task. In our control panel, we allow you to set the size of font caching from 0 to 1 Mbyte. Also, regarding the scrolling problems you noticed with some cards when a document is covered by a palette, our board has a single piece of memory called a DRAM Mask Buffer, unrelated to the graphics memory, that is used for overlapping windows. We use this buffer to store palettes and menu strips. It's as if the bigger background image doesn't know that the palette exists on the same plane, but rather on an overlay plane. I'm not sure if anyone else is doing this, but the Mac OS supports this function, as does Unix.

Phil Parker
Number Nine Visual Technology Corp.
Lexington, Mass.

Send your comments to MacWEEK Reviews Department, 301 Howard St., 15th Floor, San Francisco, Calif. 94105; fax (415) 243-3602; reviews@macweek.com. Include your name, address and phone number. We reserve the right to edit for clarity and length.

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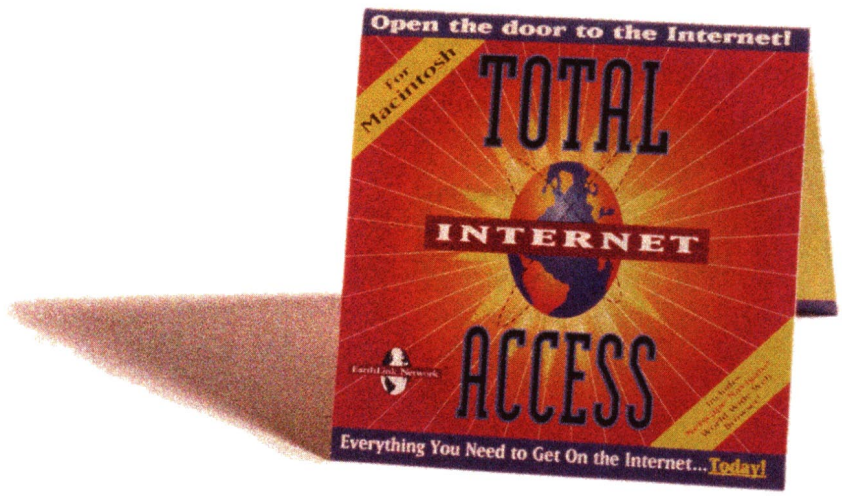

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IN BRIEF

WebArranger 2.0

CE Software revamps PIM into Net-management util

Overall value: ♦♦♦

With WebArranger 2.0, CE Software Inc. has renamed, revamped and lowered the price of Common Knowledge Inc.'s personal information manager, Arrange, and steered it toward the task of Internet information management, especially for collecting and tracking URLs. While CE Software gave away Version 1 as freeware in hopes of building interest, the $79 WebArranger 2 is the first commercial release, and for the money you get a good product.

Behind its new moniker, WebArranger users will find a complex but flexible PIM with excellent Web integration features. For example, storing contacts' e-mail addresses as URLs (uniform resource locators) allows WebArranger to fire up Qualcomm Inc.'s Eudora or Claris Corp.'s Emailer when you want to send someone a message. WebArranger's organization tools include multiple outlines, note-specific fields, an integrated calendar with alarms, multilevel sorting, links among notes and a forms editor.

Plugged in

The sleeper feature of Arrange 2, though, has turned out to be the cornerstone of WebArranger: Its plug-in architecture has allowed the product to be married to the Internet.

After installation, WebArranger wisely takes advantage of Peter Lewis' popular Internet Config extension (included in the package) to determine which helper applications it should use for launching URLs. Arrange users will notice that the interface has remained intact, but the default note types now include URL and Bookmark Heading. The classic Arrange organizer outline is also available.

> Were WebArranger merely a URL repository, it wouldn't be worth learning the abstract interface, but its agents make it a useful, proactive aid.

WebArranger can launch URLs via a menu item or keyboard equivalent and can also take advantage of the IceTee extension that lets users Command-click a URL to launch it. WebArranger can import bookmarks from Netscape Navigator or Lewis' Anarchie.

Were WebArranger merely a URL repository, it wouldn't be worth learning the idiosyncrasies of its abstract interface, but its agents make it a useful, proactive aid. WebArranger's URL Validator can check if your URLs are still active and notify you of sites that have changed, while the Download Agent can retry an FTP site automatically at user-defined intervals until you successfully log on.

Grab and whack

CE Software has enhanced the Grabber, the extension that lets you bring information into WebArranger even if the application is not running, by linking it to CE's QuicKeys via an extension. If you have QuicKeys, you can specify topics for clippings. Much to our dismay, however, WebArranger still does not support Macintosh Drag and Drop, even for URLs; this is a real blow to a product designed to work closely with other applications that support the feature.

WebArranger also includes the ForeFront Group Inc.'s WebWhacker, a mini-URL manager in its own right that can download entire Web pages for offline browsing. Products such as WebWhacker have been criticized for generating undue traffic on the Internet, but their impact can be minimized if used responsibly. While WebWhacker is a nice bonus for users who dial up the Internet, communication between it and WebArranger is minimal.

WebArranger provides good export capabilities, so you can distribute collections of sites to your co-workers. As with Arrange, though, we think that once data is in WebArranger, it is too isolated. Support for AppleScript, multi-user access or a Now Up-To-Date-style menu would make it even easier to share Internet information with other applications and users. Support for Navigator's native bookmark format, though, does make it easy to publish information on a Web server.

Performance

We tested WebArranger on a Power Mac 8100/80 AV sharing a T1 connection to the Internet. Initially, we had to coax it into launching WebWhacker and Eudora, but it then served up URLs reliably, and, through the URL Validator, dutifully notified us of changed pages. You can change the frequency with which URLs are scanned via the Internet Preferences dialog box, but we'd like to have the same control over individual URLs.

Documentation and support

CE Software has replaced Arrange's copious and well-done manuals with two thin ones — a 16-page "jump-start" guide and a flashy Hot Tips and Cool Tricks booklet that introduces WebArranger's concepts. The company has, however, placed more extensive documentation in HTML format at its Web site. On-line help is also available in the form of an Arrange outline. CE Software's technical support has improved its phone waiting time since our last encounter, but it was stumped by one of our questions.

Conclusions

While WebArranger's validation and tracking features make it a capable URL manager, the product has so much in it because of its PIM roots that sometimes you feel like you're using an F-16 fighter to kill a gnat. Users looking for a more lightweight, communicative way to centralize their URLs may want to consider Aladdin Systems Inc.'s CyberFinder or OnBase Technology Inc.'s DragNet. On the other hand, WebArranger's flexible architecture ensures that avid Web watchers will be able to heavily customize their Internet forays, incorporating virtually any kind of data they deem relevant.

CE Software Inc. of West Des Moines, Iowa, can be reached at (515) 221-1801 or (800) 523-7638; fax (515) 221-2258; sales@cesoft.com; http://www.cesoft.com.

— By Ross Scott Rubin

In Brief continues on Page 44

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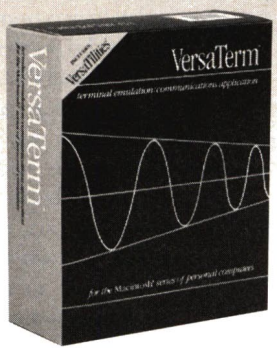

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VirusScan 1.0

McAfee's commercial version adds little to freeware utility

Overall value ♦♦

McAfee Associates Inc.'s VirusScan for the Macintosh 1.0 is a commercial version of the popular freeware virus utility Disinfectant by John Norstad. Except for some cosmetic changes to the user interface, the $65 program is almost identical to Disinfectant 3.6. Unfortunately, it remains unclear at this point why anyone would want to pay for what you can get free.

While McAfee has been a longtime player in the Intel-standard PC anti-virus market, VirusScan is the company's first Mac product, targeted mainly at existing customers who want a single source of virus protection for DOS/Windows PCs as well as Macs. McAfee's logic is that even though Disinfectant is available free, corporate IS departments will be willing to pay for dedicated technical support. Too bad the support isn't really there yet.

Value add or value subtract?

VirusScan retains Disinfectant's ease of use and elegance. Like Disinfectant, VirusScan includes a small (9-Kbyte) system extension to stop virus attacks. Rather than scan disks, VirusScan's extension monitors for infection attempts and blocks the attack. The extension then instructs you to run VirusScan to remove the virus. This makes the protection extension very unobtrusive, so users are unlikely to disable it.

In terms of performance and protection, VirusScan is almost identical to Disinfectant 3.6. McAfee did add protection from some Trojan horse applications, but, unlike Symantec Corp.'s Symantec Anti-Virus for Macintosh 4.0, neither application will detect Microsoft Word macro viruses or HyperCard-based viruses.

When we first tested Version 1.0, we discovered a serious bug that affects Power Macs. When attempting to scan applications with large resource forks, VirusScan quit unexpectedly with a Type 1 or Type 3 error. McAfee has since released VirusScan 1.0.1 with a preset memory allocation of 1,300 Kbytes, which is a kludgy fix to avoid this problem. The company said that a real fix will be included in VirusScan 2.0, scheduled for release at the end of the second quarter.

Support problems

The main reason to pay for a freeware application with a slight face lift is to get professional technical support to back it up. Unfortunately, McAfee's current Mac support is minimal.

The manual is well-written, although it reflects McAfee's Intel-standard PC orientation. For $65, Mac users ought to get their own manual.

This PC orientation is also apparent in the company's support services. McAfee has an extensive support infrastructure for its DOS and Windows products, with phone, fax, fax-back and on-line support. Except for the phone, McAfee has yet to add Mac information to any of these systems.

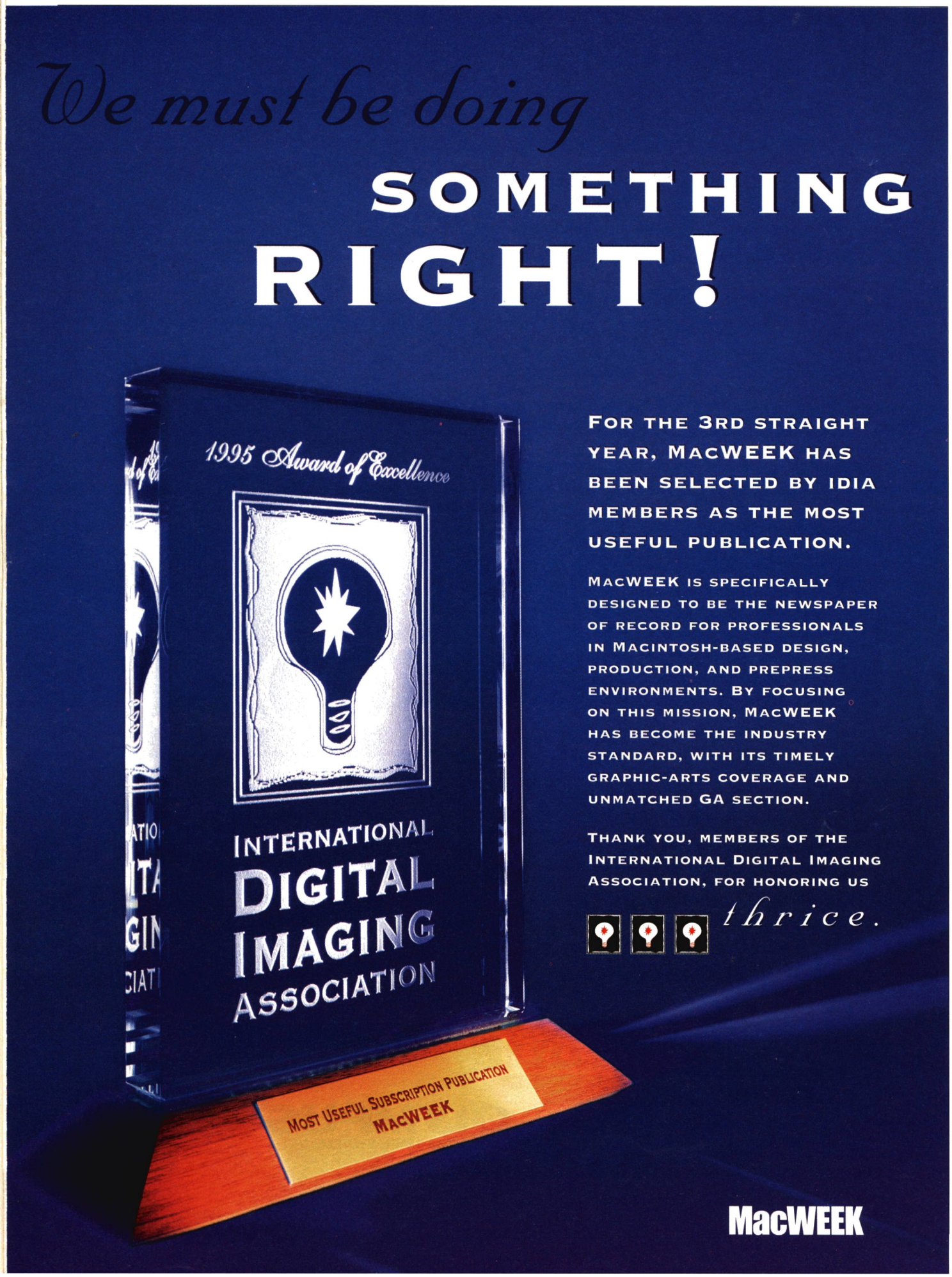
Phone support is a toll call and we were on hold 10 to 15 minutes before speaking to a technician. Leaving voice mail usually resulted in a call back by the end of the day or the next morning. McAfee's technicians were friendly and courteous, but only one was able to help us with the Mac version of VirusScan. However, the company told us that it is currently hiring more customer service representatives for Mac support.

Conclusions

If you are looking for an anti-virus utility for the Mac, there's no real reason to pay McAfee for what is essentially a copy of Disinfectant. The company said it plans to develop VirusScan independently of Disinfectant, adding more features to the commercial product, including AppleScript support, detection and removal of HyperCard-based and Microsoft Word macro viruses, and a configuration wizard to speed setup. Wait for Version 2 and re-evaluate your decision. If McAfee delivers everything it promises and beefs up its Mac support, it may have an attractive product — especially for large sites with a mixed-platform environment.

McAfee Associates Inc. of Santa Clara, Calif., can be reached at (408) 988-3832; fax (408) 970-9727; http://www.mcafee.com.

— By Frank Higgins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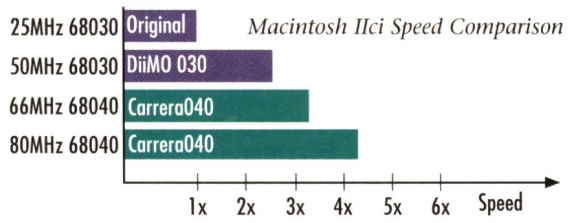
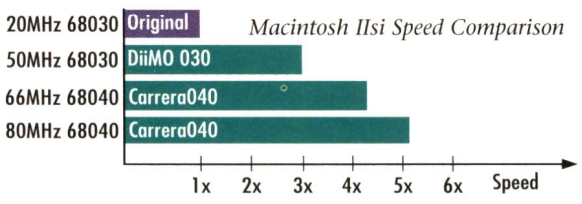
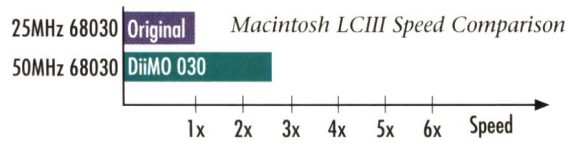


Macintosh IIci Speed Comparison



Macintosh IIsi Speed Comparison



Macintosh LCIII Speed Comparison

Macintosh IIci	w/o FPU	Order #	w/FPU	Order #
DiiMO 030 50MHz 68030	$199.99	# 79095	$249.99	# 79096
Carrera040 66/33MHz 68040	299.99	# 73306	399.99	# 73307
Carrera040 80/40MHz 68040	499.99	# 73308	599.99	# 73309
CarreraTurbo 128KB Cache Card*	99.99	# 73322		

Macintosh IIsi	w/o FPU	Order #	w/FPU	Order #
DiiMO 030 50MHz 68030	$199.99	# 79097	$249.99	# 79098
Carrera040 66/33MHz 68040	299.99	# 73310	399.99	# 73311
Carrera040 80/40MHz 68040	499.99	# 73312	599.99	# 73313
CarreraTurbo 128KB Cache Card*	99.99	# 73322		

Macintosh LCIII	w/o FPU	Order #	w/FPU	Order #
DiiMO 030 50MHz 68030	$199.99	# 79087	$249.99	# 79088

Macintosh SE/30	w/o FPU	Order #	w/FPU	Order #
DiiMO 030 50MHz 68030	$249.99	# 79089	$299.99	# 79090

Macintosh II	w/o FPU	Order #	w/FPU	Order #
Marathon 32MHz 68030	$99.99	# 79091	$149.99	# 79092
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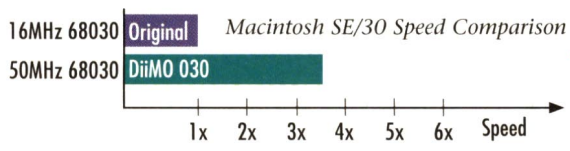

Macintosh SE/30 Speed Comparison

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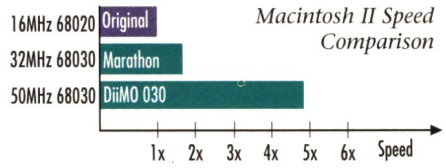
The MicroMac Marathon accelerator offers economical processing power for your Macintosh II. With a 32MHz 68030 processor and optional 32MHz FPU.



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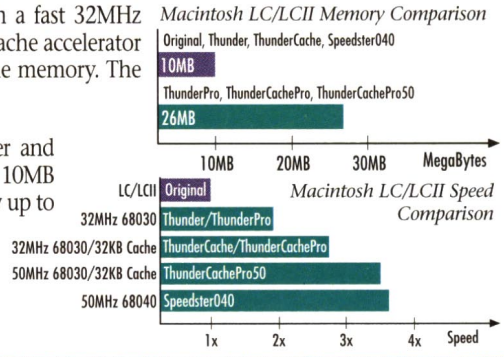

Macintosh LC/LCII Memory Comparison

Macintosh LC/LCII Speed Comparison

Macintosh LC	w/o FPU	Order #	w/FPU	Order #
Thunder 32MHz 68030			$138.99	# 69219
ThunderCache 32MHz 68030 w/32KB Cache	$199.99	# 69220	249.99	# 69221
ThunderPro 32MHz 68030 w/4 SIMMs Scks	199.99	# 69222	249.99	# 69223
ThunderCachePro 32MHz 68030 *w/32KB Cache & 4 SIMMs Scks*	249.99	# 69224	299.99	# 69225
ThunderCachePro 50MHz 68030 *w/32KB Cache & 4 SIMMs Scks*	299.99	# 69226	349.99	# 69227
Speedster040 50/25MHz 68040	299.99	# 79079	399.99	# 79080

Macintosh LCII (Performa 4xx)	w/o FPU	Order #	w/FPU	Order #
Thunder 32MHz 68030			$138.99	# 69228
ThunderCache 32MHz 68030 w/32KB Cache	$199.99	# 69229	249.99	# 69230
ThunderPro 32MHz 68030 w/4 SIMMs Scks	199.99	# 69231	249.99	# 69232
ThunderCachePro 32MHz 68030 *w/32KB Cache & 4 SIMMs Scks*	249.99	# 69233	299.99	# 69234
ThunderCachePro 50MHz 68030 *w/32KB Cache & 4 SIMMs Scks*	299.99	# 69235	349.99	# 69236
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A CLOSER LOOK

For a more detailed look at CE Software Inc.'s QuickMail 3.5, check out Reviews, 11.13.95, Page 47.

E-MAIL

Installing e-mail systems for Internet integration

By Larry Stevens

When Jeff Elkins-Nesheim, computer coordinator at the department of student activities on Texas A&M University's College Station campus, came aboard about a year ago, the 25 computer users in the department were successfully communicating with each other using QuickMail from CE Software Inc. of West Des Moines, Iowa. No one had any reason to complain about the functionality or stability of that e-mail product. But then Elkins-Nesheim hatched the idea of bringing the 900-plus student organizations into the department's e-mail system.

"People told me there was no way we could get the funding to increase our QuickMail licenses from 25 to 900," Elkins-Nesheim said. He found the solution on the Internet.

His idea was to ditch QuickMail entirely and replace it with MailShare, freeware from Apple that has since been replaced by the Apple Internet Mail Server. The system is running on a Power Mac 6100. Clients use the freeware Eudora Light from Qualcomm Inc. of San Diego. Total cost to the department's budget: zero. Now, five months after the decision to switch, the department has more than 100 heavily used Internet e-mail accounts. Plans are under way to gradually add more users until all the student organizations are supported.

While no one at the college seems to miss QuickMail, anyone who wants a more full-featured client can opt to purchase Eudora Pro, Qualcomm's commercial product, which adds notification of new mail, message filtering and spell checking.

Administrative duties using MailShare are light, according to Elkins-Nesheim. He said he can add an account by double-clicking on an icon and entering the user's name. And MailShare has not crashed in four months of heavy use.

"Until I need to enter a new account, I literally forget that the mail server is sitting on a shelf in my office, churning peacefully away," he said.

While the solution at Texas A&M was reasonable, few companies are willing or able to dispense with their internal e-mail systems in favor of Internet connections. But increasingly, smaller companies want to add Internet connections to their e-mail systems.

"I have repeatedly paid for e-mail user licenses and upgrades to CE and resent having to pay again."

— Gino Larsen-Giacalone, Heartland Group Inc.

In fact, the Internet has become so important that connecting to it is often the main concern of system administrators, no matter what e-mail system they're using. And for those administrators, the easier and more inexpensive it is to integrate internal e-mail and the Internet, the happier they are.

Pay and pay again

The lack of a direct means of integrating the Internet with QuickMail was a thorn in the side of Gino Larsen-Giacalone, computer services and facilities manager at Heartland Group Inc., a real estate consulting company based in Seattle. While Larsen-Giacalone said he likes QuickMail, he called CE's strategy of leaving the Internet functions to StarNine Technologies Inc. an unreasonable expense. "I feel I have repeatedly paid for e-mail user licenses and upgrades to CE and resent having to pay again [for Internet access]," Larsen-Giacalone said.

CE first brought its users to the Internet though the QuickMail Internet Access Kit, which included StarNine's MailLink Remote gateway software. The new versions of QuickMail, 3.5 and 3.6, now come with a 10-user Internet Sampler Pack for Internet access. However, that solution, which was announced last summer, came too late to help Larsen-Giacalone.

And Larsen-Giacalone has not been able to upgrade QuickMail from Version 2.x. The fact that he can't is his second gripe with CE. QuickMail 3.5 doesn't run on the Mac SE, since the minimum processor is a 68020.

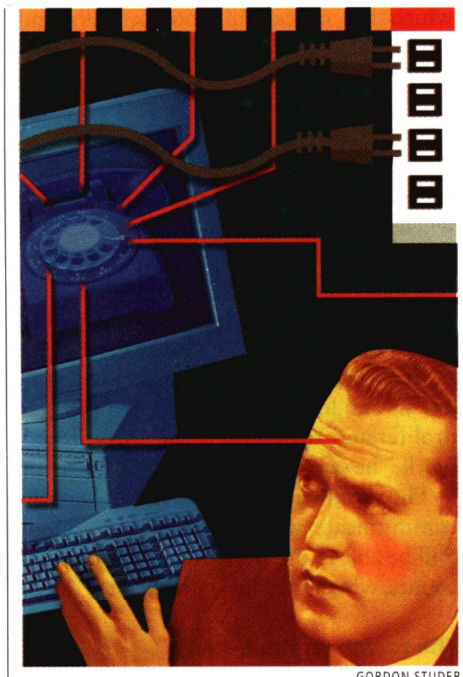
"As a small company, I can't just order up the perfect new hardware because the communications software stops supporting the computers we already have in place," he said. Accordingly, his company has opted not to upgrade.

But Larsen-Giacalone is quick to point out that he's not staying with QuickMail out of loyalty. Despite the problems, he said he thinks it's an excellent e-mail system that is easy to use and administer. In fact, it cut a day off the typical communications cycle between the remote offices.

"It changed the culture of the regional office from feeling like they were in Siberia to knowing that they were in the loop," he said. "Everyone participates in the low-priority traffic about such things as who is going to come in late, birthday greetings and who left their dirty dishes in the sink."

See Solutions, next page

SCOTT BALDWIN



GORDON STUDER

MACINTOUCH

RIC FORD

Open Transport is friendly, but splits Mac family

The System 7.5.3 knowledge base is growing rapidly on-line as the Macintosh community collaborates on analyzing the update. It is a good thing, too, because there is a lot to analyze — everything from installation procedures to crashes with specific configurations of multiple components.

Open Transport constitutes one of the greatest changes in the new Mac OS, and it is a good place to focus attention after handling the most basic matters of hard drive compatibility and installation.

Perhaps the best thing about Open Transport is its dynamic flexibility. We can change networks or parameters on the fly without going through the painful process of restarting the computer. And the new interface lets us manage multiple TCP/IP configurations easily, unlike MacTCP, which forced us to use special manual procedures or a non-Apple utility to store and switch parameters.

Open Transport is also more elegant in its architecture. Switching among different types of networks will be simpler from a user's or application's point of view, and new networking components can be introduced more easily, thanks to neater layers of abstraction.

See MacInTouch, next page

SOLUTIONS

From previous page

Jim Bage, MIS director at Lydall Inc., which manufactures products from recycled paper, also used his company's e-mail system to join remote offices. The company, which has offices in Hoosick Falls and Troy, N.Y., and Covington, Tenn., uses DaVinci eMail from DaVinci Systems Corp., a subsidiary of On Technology Inc. of Morrisville, N.C., for internal e-mail and will soon for Internet connectivity. He said because he expects the Internet connection will be important to him, he likes DaVinci's integration with Novell Inc.'s NetWare MHS and Global MHS, which provide interoperability and connectivity with other e-mail systems, including the Internet.

"It takes about five seconds to add someone in any location, and that change gets proliferated throughout the [MHS] network," he said.

The result will be that users who have to communicate with customers via e-mail will be able to ditch their CompuServe accounts, which they have to dial into.

The form's in the e-mail

Another feature Bage said he is looking forward to using is the forms module, available as an option on the newest DaVinci eMail, Version 3.5. He said he believes this will help him create an order-entry system to replace the five-part paper forms his company currently uses. Instead of printing out the forms, which are sent via paper mail to the various offices, the electronic forms will be automatically transmitted via e-mail to the people who have to work on them.

Manufacturing companies such as Lydall, in which most correspondence is internal, may have the luxury of a leisurely path to the Internet. But service companies, which are more outwardly focused and have more correspondence with customers, may not be able to postpone Internet access for long.

For example, Horizons Video and Film Inc., a Columbus, Ohio, production company, is in constant communication with its customers, exchanging not only notes but graphical enclosures as well. So when Chuck Brown, network supervisor for Horizons, wanted to offer users Internet access, he found his e-mail system, SnapMail from Casady & Greene Inc. of Salinas, Calif., was lacking.

> Increasingly, smaller companies want to add Internet connections to their e-mail systems.

"Many of our clients were asking us for Internet access, and we couldn't hold back much longer," Brown said. Horizons moved to QuickMail, but that didn't last long. "QuickMail required too much thought," Brown said. "We would have to retrain our people, and that would be a problem, since a few of them never really come in to the office." Brown added that he likes that SnapMail lets you send messages directly to individuals rather than routing them through a server.

So Brown moved the company back to SnapMail. Fortunately, last spring Casady & Greene released SnapMail Version 2, which includes the HoloGate gateway to Information Access Technologies Inc.'s UUCP (Unix to Unix Copy Program), SoftArc Inc.'s FirstClass, Microsoft Mail, QuickMail and ResNova Software Inc.'s NovaLink.

No instant delivery

Other companies, however, prefer that users be able to control when they receive and read their mail. In fact, that was why Lee Schwing, director of information systems at entertainment law firm Ziffren Brittenham Branca & Fischer of Los Angeles, moved from an old mail system to Microsoft Mail almost five years ago. The problem with instant delivery occurred when users were working with large files or doing complex operations on their computers. "When a message came in, either the machine would slow down dramatically or it would crash," Schwing said. While she said she realizes that current Intel-standard PCs and Macs are more powerful and may be better able to handle instant delivery, her firm prefers the peace of mind that comes when no message travels to the client machine automatically.

Ziffren Brittenham Branca & Fischer is an anomaly in that it does virtually no litigation; it confines itself to negotiating contracts for the entertainment world. Accordingly, it has to send and receive e-mail from myriad agents and entertainers.

Unfortunately, because much of that correspondence is confidential, the firm can't use the Internet for a good percentage of its external communications. Schwing said she is looking for a good commercial encryption product, but until she finds one, most of the confidential communications are done via individual CompuServe or America Online accounts, or fax. However, for regular clients, Schwing uses Microsoft Transfer Agent for Microsoft Mail, which lets her company link directly to the mail system of another company. But although it works fine when completely installed, Schwing said she is not entirely happy with it.

"The setup is very difficult," she said. "[We] have to configure our e-mail systems just right, then test the connection. Usually it doesn't work the first few times, and we have to go through the process again." Finding a way to communicate securely over the Internet would solve the problem in a less cumbersome manner.

Employees at Beaupre & Co. Public Relations Inc. of Portsmouth, N.H., also communicate with people outside their company. E-mail to clients and the media exceeds that to internal users in this 13-person office. In fact, if it weren't for the Internet, Beaupre probably wouldn't have bothered installing DaVinci eMail, according to Stephen Hodgdon, director of strategic services.

Since creating the Internet link about 18 months ago, "Its use has grown by leaps and bounds," Hodgdon said. "It just about replaced the fax machine as the primary way to exchange documents."

But even if the company wasn't able to justify the purchase of DaVinci eMail based only on internal use, Hodgdon said he has found a number of ways the program improves productivity, even for such a small number of users.

For example, he calls DaVinci eMail's bulletin board function "a poor man's Lotus Notes," referring to Lotus Development Corp.'s e-mail system. It's used as a central repository for all company information, such as the names of new media contacts or changes in the preferred way to send mail to clients.

Integrated e-mail

The Internet is actually one of the oldest e-mail systems. But its commercial use, as opposed to academic or defense-related uses, has taken off only during the past couple of years. Not long ago, many business cards would be cluttered with four or five different e-mail addresses — including MCI Mail, AOL and CompuServe — to accommodate the largest number of correspondence.

Now that is all but replaced with a single Internet address. At the same time, companies are finding that by integrating their e-mail systems into the Internet, their users have the advantage of direct connectivity from their desktop to the desktops of their external correspondents. □

MACINTOUCH

From previous page

Performance *potential* is very good with Open Transport, but you may not see any obvious improvement, at least for a while. The big gains depend on developers rewriting applications for Open Transport's new programming interfaces and on conversion of various components and drivers to PowerPC code. (Open Transport, itself, is PowerPC-native, but its emulation code and most drivers are not.)

AppleTalk's architecture has serious bottlenecks that Open Transport cannot fix. TCP/IP applications are much more likely to benefit from Open Transport's developing performance enhancements, and AppleShare may perform poorly. (We need some good testing in this area.)

Class distinctions

There are three classes of systems in the new world of Open Transport networking (plus the 5200-, 5300-, 6200- and 6300-series desktop systems that are not yet supported because of development problems).

Macs with 68000 and 68020 processors cannot run Open Transport at all, so they run what Apple calls "classic networking," with the MacTCP and Network control panels.

Macs with 68030 and 68040 processors, and non-PCI Power Macs, have a choice of running classic or Open Transport networking. Open Transport is not likely to help performance much on these systems and may even slow some operations down, but it offers more convenience and flexibility, with its new TCP/IP and AppleTalk control panels.

> **There was a comedy of errors in the lower levels of Ethernet engineering.**

Apple does not support classic networking on PCI Power Macs, and it is not clear if some variation on the original MacTCP work-around for these models (see 07.24.95, Page 36) is still viable. Apple's Network Software Selector, the utility for switching between classic and Open Transport networking, is a little strange. It switches to Open Transport networking by disabling the MacTCP and Network control panels and making them invisible. The files remain in the Control Panels folder, however, for switching back. (Apple puts Network Software Selector in an Apple Extras folder instead of more conveniently in Apple Menu Items or Control Panels.)

Some networking software will not run successfully on the PCI machines if a classic networking work-around is not found. Apple's LaserWriter Bridge, LocalTalk Bridge and Apple Internet Mail Server are being revised, but other incompatible Apple networking software may be abandoned.

Ethernet and errors

A comedy of errors in the lower levels of Apple Ethernet networking products created some additional issues affecting PCI-based Power Macs running System 7.5.3. The update repairs a bug in Open Firmware, the start-time configuration scheme introduced in these models, and the result is that Ethernet hardware addresses change in the Power Mac 7200, 7500, 8500 and 9500. According to Apple documentation, the problem can affect such services as BootP, DHCP (Dynamic Host Configuration Protocol), RARP (Reverse Address Resolution Protocol), certain fire-wall and security scenarios, some routing Access Control Lists, and smart Ethernet hubs incorporating low-level security. (The detailed description is available on my Web site.)

I made an error in a previous column, too. System 7.5.3's Apple Menu Options file is Version 1.1.2, not 1.0.2. System 7.5.3 also includes AppleShare Workstation 3.6.1RevB. According to Apple, the only difference between this and the 3.6.1 file is the addition of a "bundle bit." □

Comments on MacInTouch are welcome at (508) 897-2621. Please address e-mail to ricford@macintouch.com on the Internet or 72511,44 on CompuServe. The MacInTouch home page is at http://www.macintouch.com/.

Some people scan in RGB

Some people scan in CMYK

Maybe you should see what happens when you scan in CIELAB

The only way to capture the maximum amount of color data from your original is to scan into the CIELAB color space. And the only way to scan in the CIELAB color space on your desktop is with the new SAPHIR scanner with LinoColor™ software, from the world leader in high-end color scanning: Linotype-Hell.

SAPHIR provides fast one-pass scanning and ColorSync® 2.0 compatibility. LinoColor software provides the most powerful color software ever put into a desktop system. Basically, it gives you the same color capabilities that prepress shops and printers have been using for years. Yet it's so easy to use that even novices can achieve professional-quality results in almost no time at all.

So why limit yourself? Get the full color you deserve. With SAPHIR and LinoColor. Only from Linotype-Hell. For more information, call 800-842-9721. In Canada, 800-668-0770. Or visit us on the Web at http://www.linotype.com

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MACUSER EDITORS' CHOICE AWARD 1995 WINNER

MacUser RATED 4½ MAY 1996

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APS Technologies

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APS I 2160 $479.95

Internal configuration

IBM

- 8ms average seek
- Over 2060MB formatted capacity
- The best value for performance and capacity
- 5-year warranty

With high-performance, superior reliability, and exceptional value, the new APS I 2160 is a dynamite choice as your next workstation or server drive. Its 2063MB formatted capacity, IBM MR head technology and 800,000 hour MTBF fit the rigorous demands of applications ranging from database and spreadsheet use to desktop publishing and imaging.

2GB - 7200 RPM PERFORMANCE, 5400 RPM PRICE

APS MS 2000 $499.95

Internal configuration

MICROPOLIS

- 7.31MB/sec. sust. write, 4.54MB/sec. sust. read
- 5400 rpm mechanism
- Performs like a 7200rpm drive
- 5-year warranty

That's right, this incredible drive has the performance you'd expect from a 7200 RPM mechanism but with a 5400 rpm drive's price – and reliability! The APS MS 2000 formats to 2047MB; delivers sustained reads at up to 4.54MB/ sec. and sustained writes at up to 7.31MB/sec; has an avg. access time of 20 ms and avg. seek of 9.6 ms. It has a 5-year warranty and is rated at 650,000 MTBF.

HIGH PERFORMANCE SCSI 1.2GB

APS Q 1280 JUST $269.95

Internal configuration SCSI

Quantum

- High areal density and PRML read channel
- 5400 rpm mechanism
- 3-year warranty
- Fast ATA-2 version available for just $239.95

Finally there's a hard drive that combines the reliability of a 5400 rpm mechanism with high performance. The new APS Q 1280 is capable of 4.39MB per second sustained writes and 5.50MB per second sustained reads, making it great for any demanding application. It is backed by a three-year warranty and supports a 500,000 hour MTBF.

APS SCSI DRIVES

Model	Capacity/Features	Awards	Internal	SR2000
APS Q 840 Quantum 840 Trailblazer	811MB 4500 rpm	MacUser ZD LABS ★★★★	$189.95	NEW LOW PRICE $259.95
APS Q 1280A Quantum Fireball II 1280	1222MB 5400 rpm – IDE (Fast ATA-2)		239.95 NEW LOW PRICE	N/A
APS Q 1280 Quantum Fireball II 1280	1222MB 5400 rpm	Power Matched for PowerPC	269.95 NEW LOW PRICE	369.95
APS I 2160 IBM Ultrastar ES	2063MB 5400 rpm	Power Matched for PowerPC	479.95 NEW LOW PRICE	579.95
APS MS 2000 Micropolis 4421	2047MB 5400 rpm	Power Matched for PowerPC	499.95	599.95
APS Q 2210* Quantum Capella	2047MB 5400 rpm	MacUser ZD LABS ★★★★	599.95	699.95
APS ST 4200 Seagate ST 15230N Hawk	4094MB 5400 rpm		899.95	999.95

While supplies last

APS IDE DRIVES FOR MACINTOSH

Model	Capacity/Features	Internal
APS Q 1280A Quantum Fireball II 1280	1222MB 5400 rpm (Fast ATA-2)	NEW LOW PRICE $239.95
APS ST 2140A Seagate Medalist ST32140A	2167MB 5400 rpm (Fast ATA-2)	349.95

To receive an automated fax listing of all APS documents, call 800-374-5802 from any touch-tone telephone

Then call 816-920-4150 from a fax machine with a handset or fax modem and follow the instructions.

APS HIGH-PERFORMANCE SCSI DRIVES

Model	Capacity/Features	Awards	Internal	SR2000
APS MS 2.0 Micropolis 4221	1955MB 7200 rpm	Power Matched for PowerPC; MacUser ZD LABS ★★★½	$599.95	$699.95
APS MS 2.0AV Micropolis 4221AV	1955MB 7200 rpm	Power Matched for PowerPC	699.95	799.95
APS Q 2.0 Quantum Atlas XP32150	2050MB 7200 rpm	Power Matched for PowerPC; MacUser ZD LABS ★★★★	699.95	NEW LOW PRICE 799.95
APS ST 2.0 Seagate ST 32550N	2047MB 7200 rpm		749.95	849.95
APS MS 4.0 Micropolis 3243	4064MB 7200 rpm	Power Matched for PowerPC; MacUser ZD LABS ★★★★	999.95	1099.95
APS Q 4.0 Quantum Atlas XP34300	4101MB 7200 rpm	Power Matched for PowerPC; MacUser ZD LABS ★★★★½	979.95	NEW LOW PRICE 1079.95
APS MS 4.0AV Micropolis 3243AV	4064MB 7200 rpm	Power Matched for PowerPC	1099.95	1199.95
APS ST 4.0 Seagate ST 15150N	4094MB 7200 rpm	MacWeek ◆◆◆◆; MacUser ZD LABS ★★★½	1199.95	1299.95
APS MS 9.0 Micropolis 1991	8669MB 5400 rpm		NEW LOW PRICE 1899.95	2099.95
APS MS9.0AV Micropolis 1991AV	8669MB 5400 rpm	MacUser ZD LABS ★★★★	1999.95	2199.95
APS ST 9.0 Seagate ST410800N	8669MB 5400 rpm		2199.95	2399.95

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APS FAST/WIDE SCSI DRIVES

Model	Capacity/Features	Awards	Internal	SR2000
APS MS 2.0W Micropolis 4221W	1955MB 7200 rpm	Power Matched for PowerPC	$699.95	$799.95
APS Q 2.0W Quantum Atlas XP32150W	2050MB 7200 rpm	Power Matched for PowerPC	799.95	NEW LOW PRICE 899.95
APS MS 4.0W Micropolis 3243W	4064MB 7200 rpm	Power Matched for PowerPC	1099.95	1199.95
APS Q 4.0W Quantum Atlas XP34300W	4101MB 7200 rpm	Power Matched for PowerPC	1079.95	NEW LOW PRICE 1179.95

FAST/WIDE ADAPTER CARDS

Model	External SCSI Connection	Internal
QLogic Fast!SCSI Mac PCI-W Adapter for Fast/Wide drives	HD 68-Pin	$379.95
Silicon Express IV For NuBus Quadras & Power Macs only. Fast/Wide adapter card.	HD 68-Pin	849.95

APS IDE POWERBOOK DRIVES

Model	Capacity/Features	Awards	Internal
APS Q 810 Quantum Europa	778MB 3800 rpm, Fast ATA-2	NEW LOW PRICE	$379.95
APS Q 1.08 Quantum Europa	1037MB 3800 rpm, Fast ATA-2		474.95

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**Media cost*

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- ✔ Includes the latest Retrospect 3.0 backup software – FREE

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APS SYQUEST DRIVES

Model	Capacity/Feature	Awards	Internal	SR2000
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APS SQ 5200 Ultimate storage flexibility	194MB	NEW LOW PRICE	N/A	389.95

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Model	Features	Awards	Internal	SR2000
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APS PD4 600MB optical storage with 4X CD-ROM in one device	CD-ROM/Removable Optical		N/A	499.95*
APS CD-R FREE TOAST CD-ROM Pro CD recording software ($500 value)	Recordable CD-ROM		N/A	999.95*
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Model	Capacity/Features	Awards	SR2000
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APS 1.3GB MO Sony SMO F-531 mechanism	4MB cache		1699.95

APS QIC & DAT TAPE BACKUP SYSTEMS

Model	Capacity/Features	Awards	Internal	SR2000
APS HyperQIC™ QIC 3080 Mechanism	2GB	MacWeek	N/A	$499.95
APS DAT DDS-1 Non-Compression Mech.	2GB	Back Again by popular demand!	$649.95	699.95
APS HyperDAT® DDS-2 Compression Mechanism	8GB		849.95	899.95
APS HyperDAT® Pro DDS-2 High-Speed Mechanism	8GB		1049.95	1099.95
APS DATLoader600 Fastest 4mm autoloader in the world	48GB		N/A	2699.95

APS DLT TAPE BACKUP SYSTEMS

Model	Capacity/Features	Awards	SR2000
APS DLT30 Digital Linear Tape Mechanism	30GB	MacUser Editors' Choice Award 1995 FINALIST	$3999.95
APS DLT40 Digital Linear Tape Mechanism	40GB		5499.95
APS DLT4500 Loader Digital Linear Tape Mechanism	200GB		9999.95
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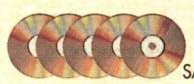

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SONY SALE PRICE

106151	3-PK 128MB MO	$59.95
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APS DATLoader600

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- Listed capacities are formatted
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	11 ms Seek	5400 RPM 128K Buffer	*5 Year Warranty*	
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Conner 4.2 GB *Fast AV Performance!*		**$1025**	**$1085**
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Seagate 9.0 GB Fast & Wide Elite		**$2195**	**$2325**
11 ms Seek	5400 RPM 1024KBuffer	5 Year Warranty	

Seagate

1080 MB			**$265**	**$325**
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4.3 GB Barracuda 4			**1165**	**1225**
8 ms Seek	7200 RPM	1024K Buffer	5 Year Warranty	
2.5 GB Fast & Wide Barracuda 2			**775**	**875**
8 ms Seek	7200 RPM	1024K Buffer	5 Year Warranty	
4.3 GB Fast & Wide Barracuda 4			**1215**	**1315**
8 ms Seek	7200 RPM	1024K Buffer	5 Year Warranty	
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4.2 GB *Fast AV Performance!*			**1025**	**1085**
8 ms Seek	7200 RPM	512K Buffer	5 Year Warranty	
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Fast SCSI 2	8.5 ms Seek	7200 RPM 512K Buffer	5 Year Warranty	
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2.0 GB *UltraStar ES* *Value!*			**495**	**555**
9ms Seek	5400 RPM	512K Buffer	5 Year Warranty	
2.2 GB *UltraStar XP* *AV Performance!*			**755**	**815**
7.5 ms Seek	7200 RPM	512K Buffer	5 Year Warranty	
4.3 GB *UltraStar XP* *AV Performance!*			**1165**	**1225**
8 ms Seek	7200 RPM	512K Buffer	5 Year Warranty	

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8.5ms Seek	7200 RPM	1024K Buffer	5 Year Warranty	
4.2 GB			**1075**	**1135**
8ms Seek	7200 RPM	1024K Buffer	5 Year Warranty	

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135MB	SQEZ135	225	**88 MB**	**45**
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Capacity	*Model*	*Media*	*Int.*	*Ext.*
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Differentials available

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- 30day money back
- Toll free tech support
- In-house engineers
- Factory direct products
- Award winning service
- $5 million in inventory
- 9 Years in business

Seagate Hawk 2XL

- 1.2GB
- Ultra SCSI 3
- PRML
- Low profile
- Embedded Servo
- 3 yr warranty
- $ 399

5 YEAR WARRANTY

BRAND/MODEL	CAPACITY		ACCESS	RPM	INTERNAL	EXTERNAL
Hitachi 2.5" IDE***	540MB		14MS	5400	$ 245	
Hitachi 2.5" IDE***	810MB		14MS	5400	$ 339	
Hitachi 2.5" IDE***	1.0GIG		14MS	5400	$ 425	
Conner CFP1080	1.2GIG	LP	11MS	5400	$ 295	$ 365
Seagate ST51080N ***	1.2GIG	LP	12.5MS	5400	$ 290	$ 360
Seagate Hawk 2XL***	1.2GIG	LP	9MS	5400	$ 399	$ 469
Seagate Hawk	2.4GIG	LP	9MS	5400	$ 655	$ 725
Conner CFP2107S	2.1GIG	LP	8MS	7200	$ 759	$ 829
Quantum Capella	2.2GIG	MR	8.6MS	5400	$ 699	$ 799
Quantum Atlas	2.1GIG	LP	8MS	7200	$ 695	$ 765
Seagate Barracuda 2	2.5GIG	LP	8MS	7200	$ 715	$ 785
Seagate Barracuda 2W	2.5GIG	LP	8MS	7200	$ 775	$ 855
Conner CFP2107W	2.5GIG	LP	8MS	7200	$ 795	$ 895
Fujitsu M2934S	4.2GIG	MR	8MS	7200	$ 1075	$ 1145
Fujitsu M2934Wide	4.2GIG	MR	8MS	7200	$ 975	$ 1045
Seagate Barracuda 4	4.1GIG		8MS	7200	$ 1195	$ 1265
Seagate Barracuda 4W	4.1GIG		8MS	7200	$ 1255	$ 1325
Seagate Hawk4	4.3GIG		9MS	5400	$ 899	$ 999
Conner CFP4207S	4.2GIG		9MS	7200	$ 999	$ 1069
Conner CFP4207wide	4.2GIG		9MS	7200	$ 1099	$ 1199
Quantum Atlas	4.3GIG		8.6MS	7200	$ 999	$ 1069
Seagate Elite 9	9.0GIG		11MS	5400	$ 2095	$ 2195
Seagate Elite 9W	9.0GIG		11MS	5400	$ 2295	$ 2395

CD RECORDERS/PLAYERS

Ricoh 2 speed recorder / 2 speed player

$889

4 speed Recorder
4 speed Player
4 GIG Hard drive
10 Blank CD's
1 Toast Software
$2795

Includes Free software and 2 CD's

Yamaha 4 speed Recorder / 4 Player	External	$ 1749
Yamaha 2 speed Recorder / 4 speed Player	External	$ 1145
Yamaha 2x4 Recorder with built in hard drive	External	$ 1529
Pioneer 4 speed 6-Disc CD-ROM Changer	External	$ 325
Toshiba 3701 6 speed CD Player	External	$ 370
Pioneer 4 speed CD Player	External	$ 255

CD Network Archiving, Libraries, and Recording. All Platforms.

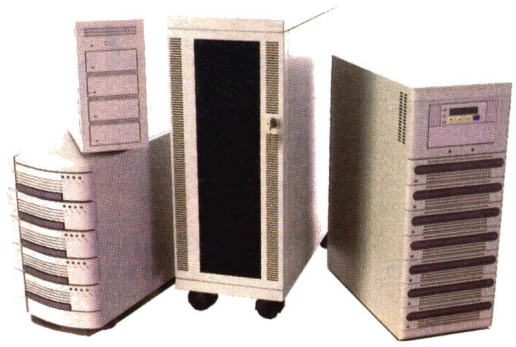
MEDIA

128MB	Optical	$ 15	10 Blank CD's	$ 69
230MB	Optical	$ 25	90M 4MM Tape	$ 8
1.3GIG	Optical	$ 69	160M 8MM Tape	$ 18

"Stick with a vendor such as Direct Connections that understands how to prepare a RAID for desktop video." MacWorld April '95

RAID SYSTEMS

FAST DESKTOP OR SERVER



- **28mb/sec sustained sequential Writes.**
  Tested with MacBench on PowerMac 9500.
  12GIG with 2 PCI accelerator cards **$ 7799**

From Hardware RAIDS to Software RAIDS, we'll show you how to configure the best system to meet your needs.

Atto Silicon Express IV	$ 835
Atto Express PCI MC	$ 765
Atto Express PCI SC	$ 345
Adaptec AHA-2940UW	$ 245
SCSI Expander	$1345

External, Remus software, and cabling

- 4 GIG Fast and Wide Raid $ 2199
- 8 GIG Fast and Wide Raid $ 2799
- 16 GIG Fast and Wide RAID $ 6130
- 28 GIG Fast and Wide RAID $ 9499
- 40 GIG Fast and Wide RAID $ 15599

MEDIA 100 TARGA 2000 radius

OPTICAL DRIVES

2.6GIG Sony Optical for $1959 external including all cabling, and software!!

1 YEAR WARRANTY

CAPACITY	MODEL	EXTERNAL
230MB	Fujitsu	$ 499
1.3GB	NEC	$ 1295
1.3GB	Sony 4MB cache	$ 1695
2.6GB	Hitachi	$ 1895
2.6GB	Sony	$ 1959
26GB	Sony Jukebox	$ 4695
52GB	Sony Jukebox	$ 6295

TAPE BACK-UP

We are the tape-backup Experts

2 YEAR WARRANTY

With 2.5MB/sec sustained transfer, the DLT2000XT is perfect for digital video or pre-press with large data files.

All systems include one tape cartridge, cabling, and Retrospect software.

CAPACITY	MODEL	MEDIA	INTERNAL	EXTERNAL
-4GIG	Tandberg Panther	1/4"	$ 469	$ 539
-8GIG	Sony 7000 DDS-2* 1.5MB/sec	4MM	$ 1199	$ 1299
-14GIG	Exabyte 8505XL	8MM	$ 2065	$ 2125
-14GIG	Exabyte 8700	8MM		$ 1575
-30GIG	DLT2000XT	1/2"		$ 3299
-40GIG	DLT4000	1/2"		$ 4999
-140GIG	Exabyte-10h Library	8MM		$ 4999
-200GIG	Spectra Logic 4000	4MM		$ 8599
-200GIG	DLT4500 Loader	1/2"		$ 8999

DIRECT CONNECTIONS 7668 Executive Drive Eden Prairie, MN 55344 Gov't, Corp, and Univ. P.O's accepted. *1YR Warranty 30 day money back does not apply towards media and software.

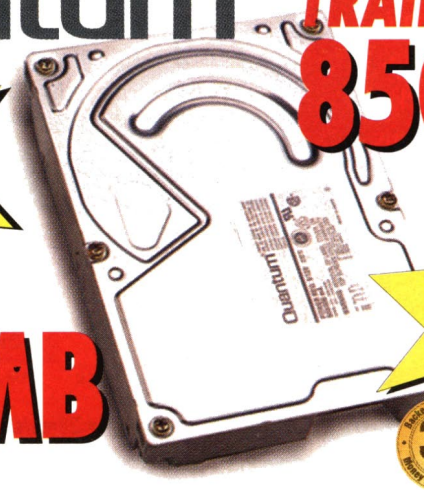
1-800-258-2622 CLUBMAC 1-800-258-2622 1-800-C

CLUBMAC HARD DRIVES

Quantum

Internal Fireball C104 0001

$299



FIREBALL 1280MB

12ms Access Time

TRAILBLAZER 850MB

14ms Access Time

Internal TrailBlazer C104 0002

$199

Backed by ClubMac's 30 DAY Money Back Guarantee

BEST BUY

Capacity	Model	Part No.	Internal	Part No.	External
850MB	Trailblazer 14ms	C104 0002	$199	C104 0052	$259
1080MB	Fireball 12ms	C104 0000	$249	C104 0050	$309
1280MB	Fireball 12ms	C104 0001	$299	C104 0051	$359

BEST BUY

$969

ATLAS 4.3GB 7200 RPM 1024K CACHE

Internal Atlas C104 0005

5 Year Manufacturer's Warranty

Backed by ClubMac's 30 DAY Money Back Guarantee

Capacity	Model	Part No.	Internal	Part No.	External
2200MB	Capella 8.5ms	C104 0003	$629	C104 0053	$689
2150MB	Atlas 8ms	C104 0004	$699	C104 0054	$759
4300MB	Atlas 8ms	C104 0005	$969	C104 0055	$1029

C104 0301

$1199

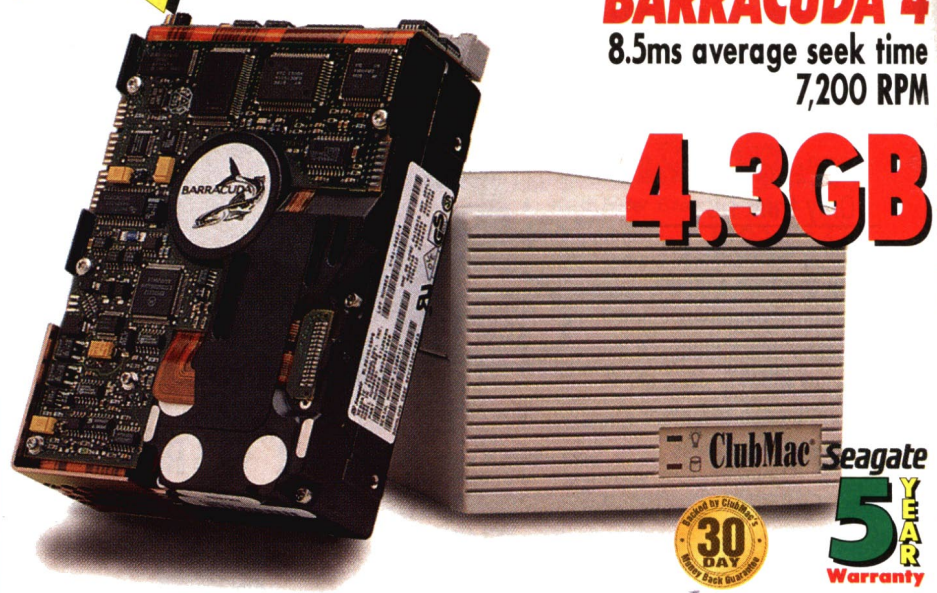
Seagate

BARRACUDA 4

8.5ms average seek time

7,200 RPM

4.3GB



Backed by ClubMac's 30 DAY Money Back Guarantee

Seagate 5 YEAR Warranty

3.5" HALF HEIGHT & LOW PROFILE (LP)

Formatted Capacity	Model	Part No.	Internal	Part No.	External
1.0GB	Medalist 5108ON	C104 0302	$269	C104 0352	$329
2.1GB	Hawk 2 32430N	C104 0303	$689	C104 0353	$749
2.5GB	Barracuda 2LP 32550N	C104 0300	$769	C104 0350	$829
4.3GB	Barracuda 4 15150N	C104 0301	$1199	C104 0351	$1259

5.25" FULL HEIGHT

9.1GB	Elite-9 410800N	C104 0305	$2099	C104 0355	$2199

CLUBMAC FAST AND WIDE DRIVES

Quantum

5 Year Manufacturer's Warranty

Backed by ClubMac's 30 DAY Money Back Guarantee

2200MB	Capella VP32210SW	C104 0100	$699	C104 0150	$799
4300MB	Grand Prix XP34301SW	C104 0101	$1029	C104 0151	$1129

Seagate

5 Year Manufacturer's Warranty

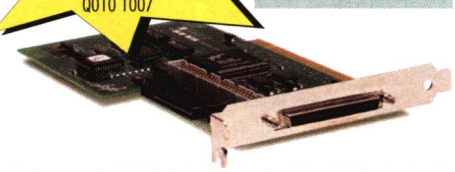
Backed by ClubMac's 30 DAY Money Back Guarantee

2.1GB	Barracuda 2LP ST32150W	C104 0400	$849	C104 0450	$949
4.3GB	Barracuda 4 ST15150W	C104 0401	$1279	C104 0451	$1379
9.1GB	ELITE 9 ST410800W	C104 0402	$2269	C104 0351	$2389

qLogic Corp.

$229

Q010 1007



PCI CARD BUNDLE

Buy any Fast and Wide Drive and get a QLogic Fast and Wide PCI SCSI Controller for only $229.

FWB incorporated

World Class Storage Solutions

JackHammer Accelerators for PCI & NuBus

Accelerate all internal and external storage devices on your computer! Hard drives, optical, tape, SyQuest, etc. Supports SCSI-1, SCSI-2, Fast SCSI-2, and Fast & Wide SCSI-2. SCSI manager 4.3 features built-in. Flash ROM upgradeable via software. Use to create the fastest arrays for Power Macintosh and Macintosh. Supports System 7.5 4GB volume size. Requires a full size NuBus slot or a PCI slot.

$389

MACWORLD EDITORS' CHOICE AWARD 1993 WINNER

F094 1033	SCSI JackHammer PCI	$389
F094 1002	SCSI JackHammer NuBus	$459

CLUBMAC CD-ROM DRIVES

$179

C104 1500

ClubMac® 4X

Features:
600KB/sec data transfer
190ms avg access time
Caddy-less design

1 Year Manufacturer's Warranty

Backed by ClubMac's 30 DAY Money Back Guarantee

C104 1500 **ClubMac QUAD-Speed CD-ROM Drive** $179

ClubMac®

		Access time	Trans Rate	
C104 1600	ClubMac Six-Speed CD-ROM Drive	140ms	900k/sec	$299
C104 1500	ClubMac Quad-Speed CD-ROM Drive	140ms	600k/sec	$179
C104 1400	ClubMac Classic 2X CD-ROM Drive	250ms	300k/sec	$99

NEC

		Access time	Trans Rate	
N024 1062	MultiSpin 6Xe CD-ROM Reader	150ms	900k/sec	$479
N024 1070	MultiSpin 4Xc 7 Disc Changer	350ms	600k/sec	$339
N024 1011	MultiSpin 3Xp plus Portable CD-ROM	240ms	500k/sec	$349

NEC

$339

N024 1070

MultiSpin 4Xc 7 Disc Changer

Load 7 Discs at a time!

1 Year Manufacturer's Warranty

4X

N024 1070 **NEC MultiSpin 4Xc 7 Disc Changer** $339

CLUBMAC REMOVABLE STORAGE

ClubMac 200 MB SyQuest® Drive

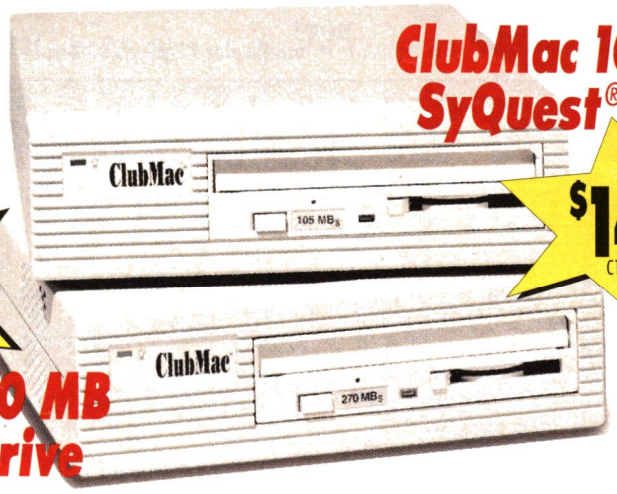
Mac OS COMPATIBLE

$349
C104 1801

Backed by ClubMac's 30 DAY Money Back Guarantee

C104 1801 **ClubMac 200MB 5.25" Removable** **$349**

ClubMac 105 MB SyQuest® Drive



Mac OS COMPATIBLE

Backed by ClubMac's 30 DAY Money Back Guarantee

$149
C104 1802

$349
C104 1803

ClubMac 270 MB SyQuest® Drive

C104 1803 **ClubMac 105MB 3.5" Removable** **$149**

C104 1802 **ClubMac 270MB 3.5" Removable** **$349**

SyQuest® EZ135 Drive

Includes One Free Cartridge

$199
S198 2001

Backed by ClubMac's 30 DAY Money Back Guarantee

Mac OS COMPATIBLE

EZ135 Drive

S198 2001 **SyQuest EZ135 135MB 3.5" Removable** **$199**

NEW LOW PRICES ON GENUINE SyQuest Cartridges

FEATURING SyQuest® REMOVABLE TECHNOLOGY

SyQuest 5 YEAR Warranty

SyQuest Media

Part Number	Media	Qty 1	Qty 10	Qty 20
S198 1010	**44MB**	$40ea	$39.50ea	$39ea
S198 1011	**88MB**	$44ea	$43.50ea	$43ea
S198 1012	**200MB**	$69ea	$68ea	$67ea
S198 1013	**105MB**	$35ea	$34.50ea	$34ea
S198 1014	**270MB**	$57ea	$56ea	$55ea
S198 2010	**EZ135MB**	$19ea	$18.50ea	$18ea

Zip Cartridge (100MB)	
1040 1006	1 Pack $19.99
1040 1011	3 Pack $49.99
1040 1010	10 Pack $149.99

Zip Drive

Includes One Free Cartridge

iomega

Manufacturer's 1 Year Warranty

$199.99
I044 1010

I044 1010 **Zip Drive with One 100MB Cartridge** **$199.99**

New ClubMac Catalog is now Available! Call 800-258-2622.

Authorized Catalog Reseller

HOURS A DAY 24 OPEN DAYS A WEEK 7

General Sales	24 Hours a Day, 7 Days a Week	(800) 258-2622
Inquiries/International Sales	24 Hours, 7 Days a Week	(714) 768-8130
Corporate/Education Sales	M - F 5am - 5pm PST	(800) 258-2621
Customer Service	M - F 7am - 5pm PST	(800) 551-6398
Technical Support	M - F 7am - 5pm PST	(800) 854-6227
24-Hour Fax		(714) 768-9354

- ClubMac hard drives include all cables, cards, leds, and brackets necessary for use with the Macintosh you specify. ClubMac formats all hard drives and installs Apple System 7.1 software, Charismac Anubis Driver, and PowerMerge LE.
- External drives include a Double Shielded, twisted pair 25-50 SCSI cable.
- ClubMac honors all original equipment manufacturers warranties. ClubMac will repair or replace drives at it's discretion. Drives returned within first 30 days of purchase are replaced with a new unit.
- All ClubMac hard drives include a 30 day money back guarantee. Your risk is the cost of shipping.

DISCOVER NOVUS · VISA · MasterCard · AMERICAN EXPRESS Cards

NO SURCHARGE!

Source Code 65166

ClubMac®

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7 Hammond, Irvine CA 92718

CLUBMAC TAPE STORAGE

ClubMac® Tape Back-Up Drives

Manufacturer's 2 Year Warranty

Backed by ClubMac's 30 DAY Money Back Guarantee

DDS-2 DAT Drive

$899
C104 1301

Includes One Free DAT Tape

Mac OS COMPATIBLE

C104 0900	**ClubMac 2-4GB SCSI QIC MiniCartridge Drive** (Cartridge not included)	$489
C104 1300	**ClubMac 2.0GB ThunderDAT Drive**	$749
C104 1301	**ClubMac 4-8GB DDS-2 DAT Drive**	$899
C104 1200	**ClubMac 4-8GB DDS-2 SuperDAT Drive**	$1059
C104 0200	**ClubMac 40GB DLT Subsystem DLT 4000**	$4999
S100 1043	**Sony QW3080XLF QIC/WIDE 2-4GB Cartridge**	$29
V010 1018	**Verbatim 90M 4mm DAT Cartridge 2-4GB**	$9
Q034 1022	**1/2 inch media for DLT 4000**	$99

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1-800-258-2622 CLUBMAC 1-800-258-2622 1-800-0

MONITORS

NEC

N026 1032

17" MultiSync XV17+

FEATURES
- 17" Flat Square Technology CRT
- 15.6" Viewable Image Size
- MAC Resolution up 1024 x 768 NI
- 0.28 mm dot pitch
- On-Screen Manager

N026 1032 **17" MultiSync XV17+** $799
N026 1007 **17" NEC XE17** $999
N026 1009 **17" NEC XP17** $1049

21" MultiSync XE21

FEATURES
- 21" Diagonal Flat Square Screen
- 19.8" Viewable Image Size
- MAC Resolution up to 1152 x 870 NI
- 0.28 mm dot pitch
- AccuColor, Digital controls
- Monitor Manager

N026 1010 **21" MultiSync XE21** $1799

15" MultiSync XV15+

FEATURES
- 15" Flat Square Technology CRT
- 13.8" Viewable Image Size
- Max Resolution: 1024 x 768
- 0.28 mm dot pitch

N026 1031 **15" MultiSync XV15+** $469

14" C400 Monitor

N026 102

- 14" AntiStatic, Non-glare CRT
- .28mm dot pitch
- Max Resolution: 832x624
- ONE year Warranty

N026 1029 **14" C400 Monitor** $299
13.2" Viewable Image size

N026 1033 **15" C500 Monitor** $399
13.8 Viewable Image Size

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R016 1034

PressView 21SR Display System

FEATURES
- Resolution up to 1600 x1200
- 21" .25m high performance DiamondTron display
- Exclusive light-absorbing "Stealth" coat that improves the displays color and contrast by preventing the user's clothing from reflecting off the CRT.
- Includes ProSense display Calibrator, ColorShield™ Hood and Display management software version 1.6.
- Color management support for AGFA FotoTune 1.0 & 2.0, Apple colorSync 1 & 2, EFIColor, and Kodak Precision.

R016 1034 **PressView 21SR Display System** $3199
R016 1031 **PressView 17SR Display System** $1999

IntelliColor Display/20e

FEATURES
- Preset resolutions: 640 x 480 at 60Hz up to 1380 x 1040 at 74hz
- 20-inch Trinitron, vertically flat tube
- 15.2 in x 11.5 in maximum viewing area
- 0.31mm Phosphor Trio Pitch
- 10 pre-sets, 15 programmable settings

BEST BUY

R016 1009 **IntelliColor Display/20e Display System** $1799

SONY

Multiscan 15SFII

FEATURES
- 13.9" Viewable image size
- .25 mm Aperture Grille Pitch
- Max Macintosh Resolution: 1024 x 768 ™ 75hz
- On screen display of digital screen controls
- 3 Year Warranty parts and 2 Year CRT

S106 1017 **Sony Multiscan 15SFII** $515

Multiscan 17SFII

FEATURES
- 16.0" Viewable image size
- .25 mm Aperture Grille Pitch
- Max Macintosh Resolution: 1024 x 768 ™ 75hz
- On screen display of digital screen controls
- Macintosh Adapter included
- 3 Year Warranty parts and 2 Year CRT

S106 1018 **Sony Multiscan 17SFII** $915

MEMORY

32MB 8x32 SIMM

M101 1070 **32-Bit 72 Pin Simm 8x32** $599

ALL MEMORY AVAILABLE! CALL FOR BEST PRICE.

VIDEO CARDS

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Thunder 30 PCI Cards

R013 1070

- 30-bit color with built-in photoshop Acceleration
- Real-time CMYK-to-RGB display
- On-the-fly resolution and bit-depth switching

R013 1070 **Thunder 30/1152** PCI Card $799
Resolution up to 1152 x 870

R013 1073 **ThunderColor 30/1600** PCI Card $1999
Resolution up to 1600 x 1200

A143 1010

XCLAIM GA

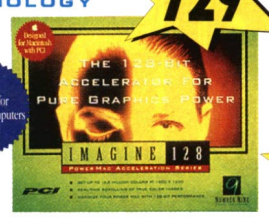
ATI's renowned *mach64* graphics acceleration chip gives the XCLAIM GA its exceptional abilities. It features 2MB or 4MB of VRAM,& displays up to 16.7 million accelerated colors at 1152x870 resolution.

A143 1010 **ATI XCLAIM GA** 2MB PCI video card $369
A143 1009 **ATI XCLAIM GA** 4MB PCI video card $499

NUMBER NINE VISUAL TECHNOLOGY

N080 1003 $729

Imagine 128



- 128-bit graphics engine
- 128-bit internal data path
- 128-bit memory bus
- Exclusive WideBus™ design means drawing pathways are a full 128-bits wide from processor to high speed VRAM

N080 1002 **Imagine 128** 8MB Accelerator $1169
N080 1003 **Imagine 128** 4MB Accelerator $729

DIGITAL VIDEO

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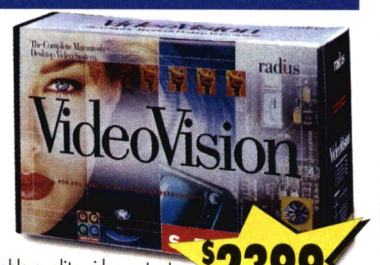
VideoVision Studio 2.5.1



Broadcast-Quality Video
VideoVision studio can deliver broadcastable quality video output in NTSC and PAL timing.

16-bit Audio
VideoVision Studio can now simultaneously capture video with 16-bit, 44.1 KHz stereo sound using the on-board audio of the Power Macintosh.

R013 1018 **VideoVision Studio 2.5.1** $2399

Radius Telecast Upgrade

Telecast combines component video, professional audio with an open architecture to give video professionals hardware and software choices. Telecast reinvents the entire post production process providing options for producing quality programming in a variety of formats.

R013 1077 **Telecast Upgrade** $3459

TRUEVISION

Targa 1000

T043 1003

Digital Video Editing

Transform Your Desktop Computer into a Powerful Digital Video Editing System.
...Easily and Affordably!

T043 1003 **Targa 1000** (PCI Power Macintosh) $2699
T043 1001 **Targa 2000** (PCI Power Macintosh) $2995*
(* as low as $2995 w/qualified trade-in)

ACCELERATORS

DAYSTAR DIGITAL

66MHz Turbo 601

D040 1039

Mac IIci, IIsi, IIvx, Performa 600

Runs your current software up to twice as fast, and it lets you run PowerPC accelerated applications 7 to 11 times faster.

100MHz PowerPro 601

D040 1043

Quadra and Centris (610, 650, 700, 800, 900, and 950 series)
- Transforms your Mac into a top of the line PowerPC workstation
- Works with your current memory
- 64-bit data path further increases performance
- Requires System 7.5

D040 1018 **40/Mhz Turbo 040** with 128K cache $599
D040 1043 **100Mhz PowerPro 601** with 1MB cache $1199
D040 1048 **100Mhz Turbo 601** $1139

MicroMac Technology

Carrera040

MAC IIci, IIisi, IIcx, or IIx
Just plug in the Carrera040 accelerator and instantly get blazing performance from your existing Mac

M264 1003 **40/80Mhz Carrera 040** with FPU $599

SCANNERS

ES1200C Pro EPSON

FEATURES
- 600 dpi optical resolution, and up to 4800 dpi(via interpolation)
- 30-bit color scanning
- Pro Package includes:
  Adobe Photoshop
  Scantastic
  KAI's PowerTools
  SCSI cable

E045 1003 **Epson ES1200C Pro-MAC Color Scanner** Full Package **$1179**

E045 1007 **Epson ES1200C LE-MAC Color Scanner** w/Scantastic **$949**

Epson ES1000C

FEATURES
- 400 dpi optical resolution, and up to 3200 dpi(via interpolation)
- 30-bit color scanning
- Package includes:
  Adobe Photoshop LE 3.0
  Xerox TextBridge
  SCSI cable
  Scantastic PIM & DA

E045 1013 **Epson ES1000C LE-MAC Color Scanner** **$735**

Powerlook II UMAX

The Magic of Color™

FEATURES
- 36-bit color scanning, 600 x 1200 dpi
- 3.3 Dynamic Range
- Includes Transparency Adapter
- Package includes:
  Adobe Photoshop
  KAI's PowerTools SE
  PowerPhotos CD
  WordLinx OCR
  Pixar Typestry
  Pixar 128CD

U010 1052 **PowerLook II** 36-bit color scanning, 600 x 1200 dpi **$2495**

Umax Vista-S12 LE

FEATURES
- 600 dpi & 33-bit equivalent analog gamma correction
- Package includes Adobe Photoshop LE 3.0, WordLinx OCR, Corel Professional Photos CD

U010 1055 **Vista-S12 LE** **$799**

Arcus II AGFA

FEATURES
- 600 dpi & 36-bit color scanning
- 3.0 Dynamic Range
- Includes Transparency Module
- Package includes:
  - Adobe Photoshop
  - Agfa FotoLook Scanner driver software
  - Agfa FotoTune Color Management software
  - "How To" Guide to Scanning

A055 1001 **AGFA Arcus II** **$2195**

MICROTEK ScanMaker III

Better Images Through Innovation.

FEATURES
- 600 dpi & 36-bit color scanning
- Includes Transparency Adapter
- Single pass scanning
- DCR (Dynamic Color Rendition) calibration/correction system
- Apple ColorSync compatible
- Package includes Adobe Photoshop

M150 1006 **Microtek ScanMaker III** **$1989**

INPUT DEVICES

VISIONEER

PaperPort Vx

FEATURES
- 6 second typical scan time
- 400 dpi resolution
- 256 Gray-scale imaging
- Scan Documents up to 30" long
- Includes OmniPage Lite, CardScan SE, PictureWorks Copier

V029 1008 **PaperPort Vx for Macintosh** **$279**

WACOM Art Z II 6" x 8" ArtPad

Don't buy a tablet that uses batteries...get a WACOM

W010 1028 **ArtZ II 6x8** **$298**

MODEMS

GLOBAL VILLAGE COMMUNICATION

TelePort Platinum Fax/Modem

G050 1016 **TelePort Platinum** 28.8 data, 14.4 S/R, GlobalFax, GlobalFax OCR **$199**

US Robotics 28.8 Sportster

The Intelligent Choice in Data Communications

U020 1021

FEATURES
- 28.8 V.34 and 33.6 kbps
- V.32 bis at 14.4 kbps
- V.42/mnp 2-4 error control
- Macverter Fax and Data Software
- CD-ROM of Internet Access Software
- Discover the World Wide Web with your Sportster Guidebook

U020 1021 **US Robotics 28.8 Sportster for Mac** **$199**

U020 1025 **US Robotics Sportster voice 28.8 w/voice** **$259**

PowerPort Pro PC Card

Simultaneous 28.8 10BT Ethernet

G050 1019 **PowerPort Platinum Pro** **$499**
Combo 10base-T Ethernet, 28.8 data, 14.4 S/R, Fax, Type II PC Card

FastMac V.34 28.8 Fax/Data Modem

FEATURES
- 28.8 kbps data modem
- 14.4 kbps send/receive fax
- Class 1 or 2 fax support
- V.42/MNP2-4 error control
- V.42bis/MNP5 data compression
- MacComCenter software for Mac

B030 1007 **Fast Mac V.34 28.8 bps Fax/Data Modem** **$139**

PRINTERS

EPSON Stylus Color Pro

FEATURES
- 720 x 720 dpi photo quality on plain paper
- PostScript upgradeable
- True black laser quality text
- Pantone matching
- Text print speed up to 3ppm, color 1ppm

E047 1019 **Epson Stylus Color Pro** **$499**

E040 1069 **Adobe PostScript Level 2** Software Upgrade for Stylus Color Pro **$199**

HEWLETT PACKARD LaserJet 5MP

FEATURES
- 600 x 600 dpi laser printing with HP Resolution Enhancement technology
- 120 levels of grey
- 6 ppm print speed
- 3MB RAM standard, expandable up to 35 MB w/Adobe Memory booster
- Adobe PostScript level 2 with 35 scale typefaces

H047 1030 **HP LaserJet 5MP Printer** **$1045**

Epson Stylus Color Pro XL

FEATURES
- Prints up to 12.5" x 18" full bleed in Photoquality color
- 720 x 720 dpi photo quality with Microdot technology
- Optional Adobe PostScript with Pantone Color Calibration

E047 1022 **Epson Stylus Color Pro XL** **$1799**

E040 1070 **Adobe PostScript Level 2** Software Upgrade for Stylus Pro XL **$265**

HP DeskJet 850C InkJet

FEATURES
- ***COLOR PRINTER***
- Dual I/O for either PC or Macintosh connection
- Black print speed up to 6ppm
- Color print speed up to 2ppm
- Handles plain and special papers, transparency film, envelopes, avert labels and index cards.

H047 1041 **HP DeskJet 850C InkJet Printer** **$515**

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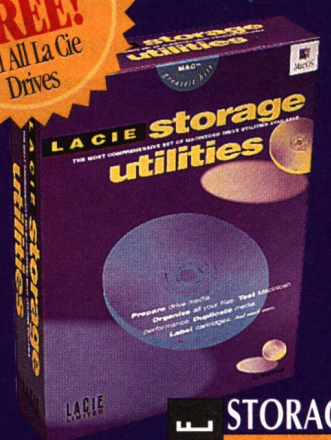

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All products bearing this Storage Utilities mark include acclaimed Silverlining Disk management software plus four other vital performance enhancements, a $99 value... ***FREE!***

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INTERNAL HARD DRIVES

Special LOW Price

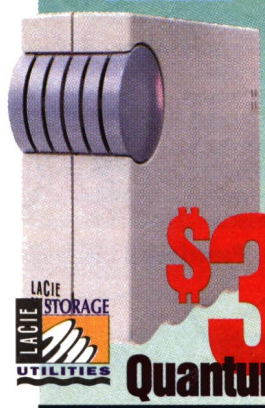
▲ High-performance drive and controller technology.

$888 Quantum Atlas 4.3 GB

3.5" Drives		
850MB Quantum Trailblazer	3 yr. warr.	$189
1080MB Quantum Fireball	3 yr. warr.	$249
1280MB Quantum Fireball	3 yr. warr.	$269
2160MB Ultrastar ES	5 yr. warr.	$489
4.3GB Quantum Atlas	5 yr. warr.	$888

Brackets available for $10 with internal hard drive purchase.

TSUNAMI HARD DRIVES



▲ Ready to plug and play with switchable active termination, cables, and La Cie Storage Utilities.

▲ Up to 4.3GB capacity in a 6.5"x8.5"x2.2" compact case.

$339 Quantum 1280 MB

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1280MB Quantum Fireball	3 yr. warr.	$339
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4.3GB Quantum Atlas	5 yr. warr.	$999

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▲ Utilize Wide-SCSI technology for high-speed, high capacity file transfer

FAST: 1 drives + 1 card
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WRITE* 13.0 MB/Sec
READ* 14.3 MB/Sec

FASTEST: 3 drives, 3 cards + RAID
WRITE* 32.8 MB/Sec
READ* 27.0 MB/Sec

Power Wide External Drives		
2.0GB Quantum Atlas Wide + Wide PCI Adaptec 2940 Board	NEW!	$1199
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2.0GB Quantum Atlas Wide + RAID + Wide PCI Adaptec 2940 Board	NEW!	$1299
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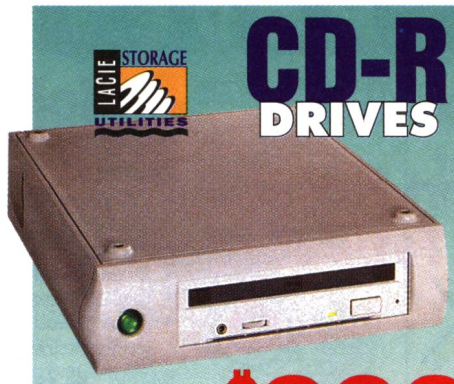
★ RAID Level 0 (Striped) For PCI Macs only

CD-R DRIVES



▲ Low cost media for backup.

▲ CD-Rs ship with Gear Multimedia software.

▲ Create your own CD with fast write capability.

$989 2X Recordable

CD-Recordables	
2X Recordable with Gear MultiMedia	$989
4X Recordable with Gear MultiMedia	$1499
650 CD-R Disk 74 Minutes	10 Disk Pack $79

OPTICAL DRIVES

▲ Optical is the new standard in removable reliability.

▲ Available in two popular capacities.

▲ Compact storage convenience.

$1999 2.6GB Optical

	Powerbook	Internal	External
230MB 1 yr. warr.	$399	$399	$469
230MB Optical Cartridge			$19.95
2.6GB External 1 yr. warr.			$1999
2.6GB Optical Cartridge			$99

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$187 EZ135

EZ135MB Includes ONE FREE cartridge and coupon for 2nd FREE cartridge by mail!	2 yr. warr.	$187

DAT DRIVES

▲ The ideal medium for data backup.

▲ The cheapest backup solution per megabyte.

$899 8.0GB DAT DDS-2

DAT Drives Includes Retrospect	
2.0GB DAT External	$699
8.0GB DAT DDS-2 External	$899
8.0GB TURBO DAT DDS-2 External	$1149

DLT DRIVES

Maximum Storage Capacity Ideal for network servers and high-end work stations

▲ Transfer rates from 150 to 180 MB per minute.

▲ Flexible cache buffer automatically adjusts to slower host data transfer rates.

$2999 30.0GB DLT External

DLT Drives Includes Retrospect	
30.0GB Quantum DLT External	$2999
40.0GB Quantum DLT External	$4999

CARTRIDGES

	Qty. 1	Qty. 10
Syquest SQ400 44MB	$38 ea.	$37 ea.
Syquest SQ800 88MB	$42 ea.	$41 ea.
Syquest SQ2000 200MB	$66 ea.	$65 ea.
Syquest EZ135 135MB	$18 ea.	$17 ea.
Syquest SQ3270 270MB	$54 ea.	$53 ea.
Optical 128MB	$23 ea.	$22 ea.
Optical 230MB	$25 ea.	$24 ea.
Optical 1.3GB	$59 ea.	$58 ea.
Optical 2.6GB	$99 ea.	$97 ea.
CD-R 74 650MB	$92 ea.	$89 ea.
DAT 90m	$9 ea.	$8 ea.
DAT 120m	$20 ea.	$19 ea.
DAT Cleaning Kit	$9 ea.	$8 ea.
DLT 30 30GB	$40 ea.	$39 ea.
DLT 40 40GB	$98 ea.	$97 ea.

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Compare these features:

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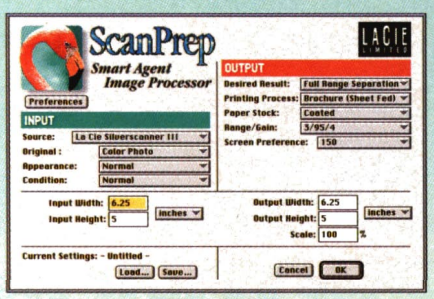
- Scans in under a minute.
- The industry's leading scanning software.

"ScanPrep is an essential application if you own a scanner... the sort of program that has to be seen to be believed."
Ben Long – MacWeek
Highest Possible Rating

"No matter what acquired plug-in you get if you use Photoshop, you'll also want to buy a copy of ScanPrep."
– MacUser
Highest Possible Rating



ScanPrep automates Photoshop's image processing tools, individually preparing each image for printing right before your eyes. Simply describe the project to ScanPrep and scan the base image. ScanPrep yields professional prepress results, quickly and easily.

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Silverscanner PRO
24 bit color, 300 x 600 dpi interpolated to 1200 dpi.
▲ Silverscan
▲ ScanPrep
▲ Omnipage Lite OCR
$599

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Silverscanner PRO with Photoshop LE
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▲ Photoshop LE
▲ ScanPrep ▲ Silverscan
▲ Omnipage Lite OCR
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▲ ScanPrep
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Silverscanner DTP with Photoshop LE
30 bit color, 400 x 800 dpi interpolated up to 3200 dpi.
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▲ ScanPrep ▲ Silverscan
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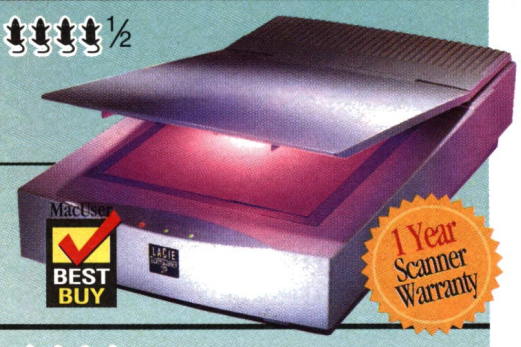

1 Year Scanner Warranty

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▲ Silverscan
▲ ScanPrep
▲ Omnipage Lite OCR
$1499

4

Silverscanner III with Photoshop Full
30 bit color, 600 x 1200 dpi interpolated up to 4800 dpi.
▲ Photoshop (Full Edition)
▲ ScanPrep ▲ Silverscan
▲ Omnipage Lite OCR
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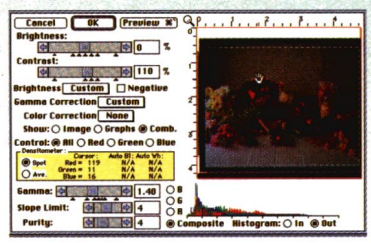
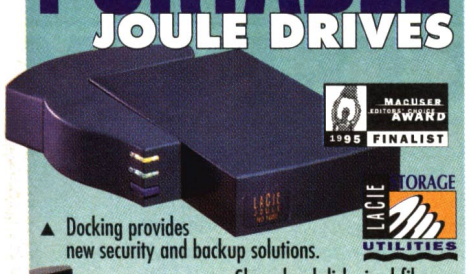
No matter which software bundle you choose, you'll also receive Silverscans' award-winning scanning software giving you professional scans.



PORTABLE JOULE DRIVES

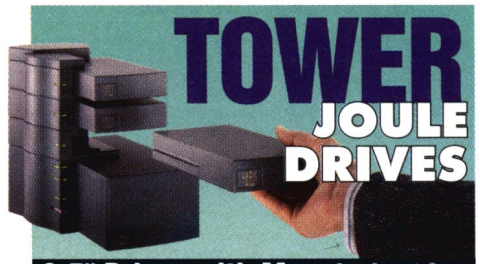


▲ Docking provides new security and backup solutions.
▲ Share hard disk-sized files with diskette convenience.
▲ Unplug and go for convenient data transport.

Joule 3.5" Drives with Dock

850MB Quantum Trailblazer	3 yr. warr.	$329
1080MB Quantum Fireball	3 yr. warr.	$369
2160MB Ultrastar ES	5 yr. warr.	$799
8.0GB DAT DDS-2	Includes Retrospect	$959
8.0GB TURBO DAT DDS-2	Inc. Retrospect	$1159
230MB Optical	1 yr. warr.	$529

TOWER JOULE DRIVES



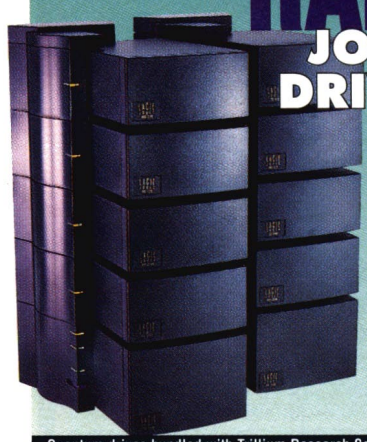
3.5" Drives with Mount For use in Tower with a Joule Base.

850MB Quantum Trailblazer	3 yr. warr.	$329
1080MB Quantum Fireball	3 yr. warr.	$369
2160MB Ultrastar ES	5 yr. warr.	$799
4.3GB Quantum Atlas	5 yr. warr.	$1099
8.0GB DAT DDS-2	Includes Retrospect	$959
8.0GB TURBO DAT DDS-2	Inc Retrospect	$1159
230MB Optical	1 yr. warr.	$529

Joule Bases – Supports Stacks Up To 6 Drives High

850MB Quantum HD	3 yr. warr.	$389
1080MB Quantum HD	3 yr. warr.	$489
2160MB Ultrastar ES HD	3 yr. warr.	$699
230MB Optical	1 yr. warr.	$529

RAID JOULE DRIVES



Quantum drives bundled with Trillium Research Software configurable to levels 0, 1, 4 & 5.

		RAID Drives Only	RAID with SCSI Card
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8.4GB	5 yr. warr.	$3499	$3799
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25.8GB	5 yr. warr.	$9999	$10299

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4MB 80/70NS	88/90
8MB 70NS	270
16MB 70NS	455

30-pin, 36 bit PC SIMMS

1MB 70NS	$45
4MB 70NS	149

72-pin SIMMs

4MB 70/60NS	$72/74
8MB 70/60NS	145/147
16MB 70/60NS	299/301
32MB 60NS	596

72-pin, 36 bit PC SIMMS

4MB 70NS/60NS EDO	$80/75
8MB 70NS/60NS EDO	339/150
16MB 70NS/60NS EDO	335/349
32MB 70NS/60NS EDO	979/636

8MB 72PIN $145

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4MB 70NS	$129

64-pin SIMMs for IIfx

1MB 80/70NS	$43/43
4MB 80/70NS	155/155
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16MB 70NS	520

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8MB 60NS	150
16MB 60NS	289
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64MB 60NS	1125

PBDUO 210/230 Series

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PB DUO-8MB	299
PB DUO-12MB	479
PB DUO-14MB	549
PB DUO-20MB	698
PB DUO-28MB	1172

What type of Memory do I need?

Standard 30-Pin Simms:
Plus, SE, SE 30, Classic, Classic II, Color Classic, LC, LCII, Performa 200, Performa 400-430, Performa 600, Quadra 900/950, Mac II, IIx, IIcx, IIsi, IIci, IIfx, IIvx, IIvi.

Standard 72-Pin Simms:
Quadra 605/630, 610, 650, 700, 800/840AV, LCIII, LC475, LC630, Performa 450-560, 575 and 6115CD, PowerMac 6100, 7100, 8100, WS 80, WS60, WS 95, WS 6150 and WS 8150, 9150.

168 Pin Dimms:
PowerMac 9500, 8500, 7500, 7200

PowerMac Memory Selection Guide

PowerMac 6100

(8MB) Standard 72-pin SIMMS

To upgrade your RAM to:	You need to order:
16MB	(2) 4MB 70/60NS
24MB	(2) 8MB 70/60NS
40MB	(2) 16MB 70/60NS
72MB	(2) 32MB 60NS

PowerMac 7100, 8100

(8MB) Standard 72-pin SIMMS

To upgrade your RAM to:	You need to order:
16MB	(2) 4MB 70/60NS
24MB	(2) 8MB 70/60NS
40MB	(2) 16MB 70/60NS
72MB	(2) 32MB 60NS
136MB	(4) 32MB 60NS
264MB *(7100 only)*	(8) 32MB 60NS

PowerMac 9500, 8500, 7500

(16MB) Standard 168-pin DIMMS

To upgrade your RAM to:	You need to order:
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48MB	(2) 16MB 70NS DIMMS
80MB	(2) 32MB 70NS DIMMS
144MB	(2) 64MB 70NS DIMMS

PowerMac 7200

(8MB) Standard 168-pin DIMMS

To upgrade your RAM to:	You need to order:
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64MB	(2) 16MB 70NS DIMMS
128MB	(4) 32MB 70NS DIMMS
256MB	(4) 64MB 70NS DIMMS

FPUs/CoProcessors Video RAM

FPU's/Math CoProcessors

Centris FPU 25MHz	$189
FPU 33MHZ DUO/P600	52
FPU Color Classic 16MHZ	44
FPU LCIII 25 MHZ	49
FPU LC/LCII 16 MHZ	49
LC575 33MHZ Math CoProc.	285

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256K 80NS Video RAM	$17
512K Video RAM	22
1MB Video RAM PM72/75/8500	55
2MB Video RAM PM 9500	225
256K/512K Cache Card	72/282
1MB Cache Card	792
256K Cache Dimm PMPCI256	109
512K Cache Dimm PMPCI512	185

MODEMS

GLOBAL VILLAGE

Teleport Platinum 28.8 V.34	$205
PowerPort 1XX Platinum 28.8 V.34	339
PowerPort Gold PC Card 14.4	180
PowerPort Platinum PC Card 28.8	349
PowerPort Platinum PRO PC Card	519

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SUPRA Simple Internet 28.8 Ext.	$189
SUPRA 28.8 V.34	229
SUPRA 28.8 PB FAX Modem	189
SUPRA EXPRESS 144 PLUS	99
SUPRA EXPRESS 288 External V.34	159

US ROBOTICS

28.8 Sportster V.34 Internet Bundle	$212
Sportster14,400 Mac & Fax	119
28.8 V.34 PCMCIA Sportster	291

TDK

28.8 V.34 PCMCIA PB190/5300	$259
Global Class 288 V.34 PCMCIA	355

Motorola

Lifestyle 28.8 V.34	$212
Power 28.8 V.34	270
ISDN Bitsurfer	279

MEGAHERTZ

Cruise Card 14.4 PCI	$135
Cruise Card 28.8	295
Cruise Card 14.4	159

ACCELERATORS

DAYSTAR DIGITAL

PowerPro 601 100MHZ $1240

Turbo 040 40MHZ w/cache	$679
Turbo 040i 33MHZ w/cache no FPU	609
PowerPro 601 100MHZ w/cache	1240
Turbo 601 100 MHZ w/adapter	1175
PowerCard 601 100MHZ	959

SONNET

Quad Doubler 40MHZ Centris610	235
Quad Doubler 40MHZ w/FPU Centris 610	345
Quad Doubler 50MHZ w/FPU Quadra 610	390
Quad Doubler 50MHZ w/FPU Centris 650	390
Quad Doubler 50 MHZ Centris 660AV/7/900	390

CD-ROM

Accessories

Mark I Flight Cont.Sys	95
Mark I Weapons Cont.Sys	69
Rudder Cont. Sys.	105

Entertainment

Battle Beast	29
Dark Forces	49
Descent	50
Dust	39
F/A-18 Hornet 2.0	49
Full Throttle	49
Havoc	39
Marathon II	45
Monopoly/Virgin	42
Myst	49
Power Pete	27
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Rebel Assault II	50
Triple A Pak	40
Warcraft 1.0	48

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Quicken 6.0 Deluxe	65

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GLOBAL VILLAGE

PowerPort Platinum PC Card $349

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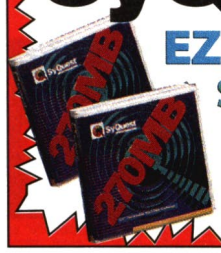

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Five-Pack	$96.25
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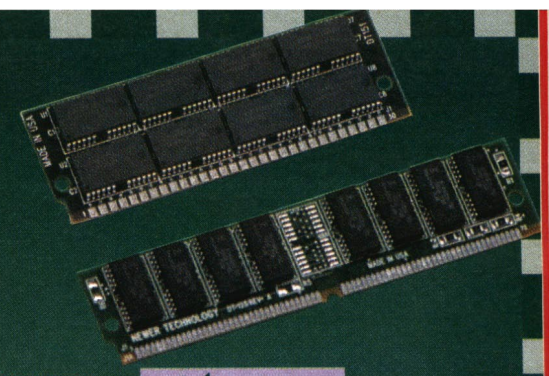

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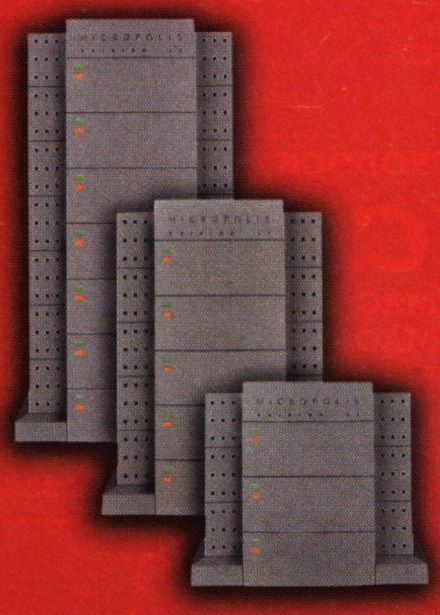

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Radius Pivot Card	SE/30	256	–	–	–
Xceed Color 30hr	SE/30	256	256	256	256
Lapis Color 16	SE/30	Thousands	Thousands	256	256
Lapis Color 24	SE/30	Millions	Millions	256	256
Radius Direct Color/gx	IIsi	Millions	–	–	–
SuperMac Spectrum 8	IIsi	256	256	256	256
SuperMac Spectrum 8.24	IIsi	Millions	256	256	256

Video Card	Platform	Monitor (Colors) 14/15"	16/17"	19/20"	21"
Radius FPD Card	Mac SE	Mono	–	–	–
SuperMac Superview	Mac SE	–	–	Mono	–
Radius TPD Interface	Mac SE	–	–	–	Mono
RasterOps 8/LC	LC/PDS	–	–	256	–
SuperMac Spectrum 8	LC/PDS	256	256	256	256
Lapis Color 16 for LC	LC/PDS	Thousands	Thousands	256	256
Micro Conversions 1724	LC/PDS	Millions	Millions	256	256
Lapis Color 24 for LC	LC/PDS	Millions	Millions	256	256

Video Card	Platform	Monitor (Colors) 14/15"	16/17"	19/20"	21"
Double Color SX	Nubus	256	256	16	–
RasterOps 708+	Nubus	256	–	256	–
RasterOps 24L	Nubus	Millions	–	–	–
RasterOps 8/LC	Nubus	–	–	256	–
SuperMac Spectrum 8	Nubus	256	256	256	–
Double Color LX	Nubus	256	256	256	256
Radius Direct Color 24	Nubus	–	–	–	Millions
E-machines Futura MX	Nubus	Millions	Millions	Millions	–

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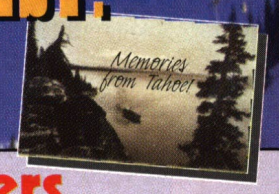

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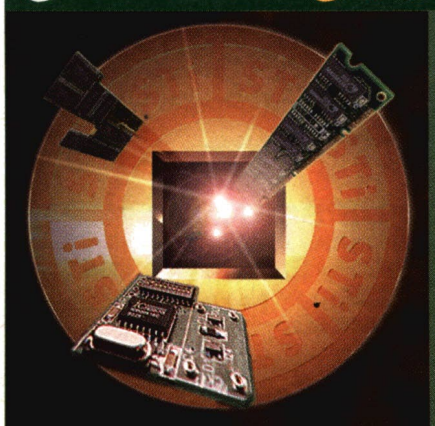

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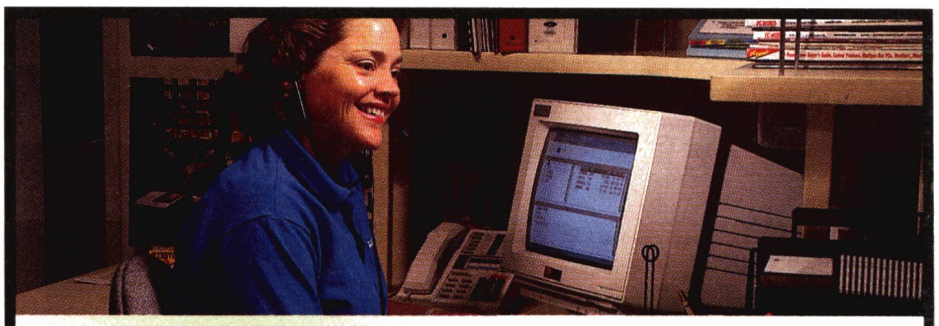

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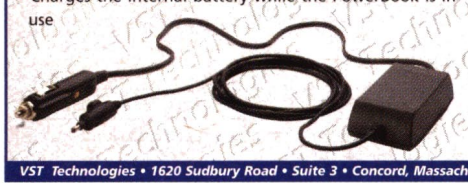

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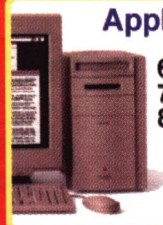

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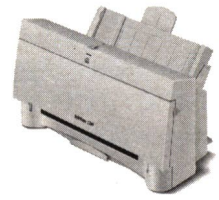

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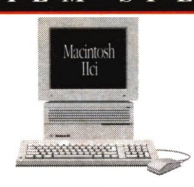

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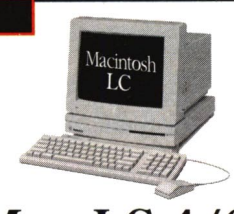

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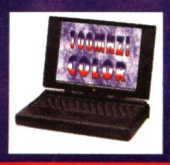

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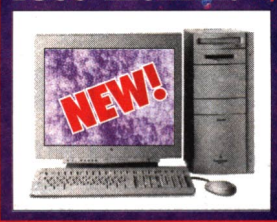

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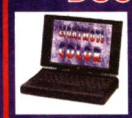

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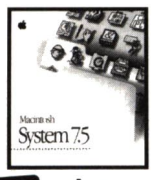

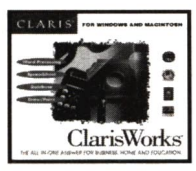

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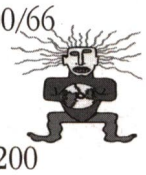

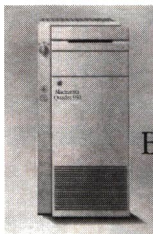

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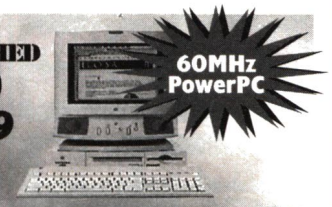

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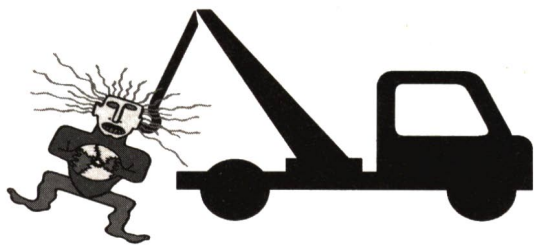

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- ClarisWorks 3.0 CD
- Sierra Club: The Blue Whale CD
- Wacky Jacks CD Game Show
- 10 Manmade Wonders CD
- FontsPro CD w/1555 fonts

EDUTAINMENT SOFTWARE:
- Peter's Magic Adventure CD
- The Math School
- First Lessons In Math
- The Talking Spelling Bee
- The Talking Alphabet Bee
- The Talking Math Bee
- Unscramble Word Game
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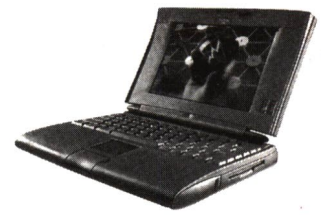

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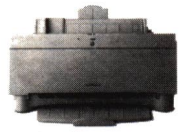

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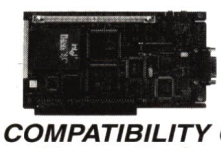

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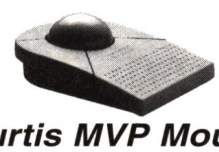

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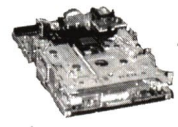

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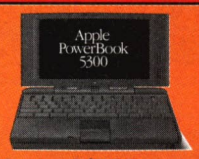

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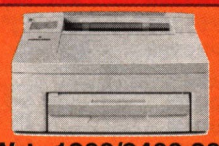

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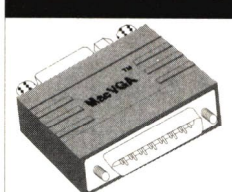

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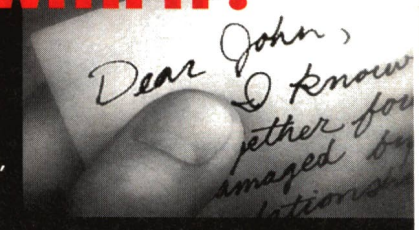

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NAB

From Page 1

lease EIAS 2.7, which will include enhanced inverse kinematics and 3-D projection mapping.

Now that the standard has been set, Digital Video Disc (DVD) promises to be omnipresent at this year's show. Sonic Solutions Inc. is staking an early claim to the new arena of DVD premastering. At the show, the company will debut Sonic DVD Creator, a $175,000 MPEG-2 and AC3 encoding and authoring system. Due in June, Sonic DVD Creator will handle video, graphics and audio.

Studer Editech Corp. and Warner Bros. International Dubbing Operations have co-developed a subtitling and dubbing system for DVD mastering. Based on Studer's MultiMix 4.0 software, Dyaxis audio workstation and Radius Inc.'s VideoVision board, the system will let users add multiple channels of subtitles as well as dubbing to a DVD movie.

Meanwhile, a new partnership between Truevision Inc. and Scitex Digital Video Inc. will bear fruit in a product called Microsphere. Due in September, the $13,500 package will include Truevision's Targa 2000 RTX real-time video-capture board and Scitex's ImMIX Professional Editing Software. A bundle with a Power Mac 9500, monitors, speakers and storage will cost less than $30,000.

Scitex said Microsphere will work with QuickTime and Motion JPEG; support NTSC and PAL (European) video; and execute dissolves, wipes, digital video effects, audio gain, fades and panning in real time.

As usual, Apple will be among the high-profile booths in the Multimedia World section of the show. The company will showcase the latest version of QuickTime, now officially called Version 2.5 (see 03.11.96, Page 1). According to sources, Apple will demonstrate a prototype 1394 PCI card that connects to DVD and video cameras.

Apple will also introduce a new M-JPEG (motion-JPEG) file format. Companies endorsing the new standard include Avid Technology Inc., Data Translation Inc. and Radius.

As part of the ongoing Silicon Studios program, Apple and Cinebase Software Inc. (formerly Visual f/x) will announce plans to bring Cinebase, a system for managing digital video assets, to the Mac OS platform by late summer. Sources said a Mac client will ship first; the company is working on a server version as well. Cinebase is reportedly also adding support for Mac graphics formats, including QuickTime, and expects the Mac client to cost far less than SGI versions.

Apple, Pacific Bell and Fore Systems Inc. will also reportedly announce a bundling deal that will combine Macs with high-speed Asynchronous Transfer Mode WANs for video production.

Adobe Systems Inc. will announce an update to After Effects. Version 3.1 will support multiprocessor CPUs as well as TIFF and the Targa file format, and it will include a new plug-in that animates lightning effects over time.

Minerva Systems Inc. will unveil its Minerva Publisher MPEG-1 system. The company will also announce a bundle that includes Publisher and the Philips Media System Video CD 2.0 Toolkit, enabling users to author and master video CDs.

Digital video rivals Avid and Data Translation will face off with new products. Avid will show its Media Composer 6.1 (see story, Page 16), and Data Translation will announce its Media 100 xs system (see 03.25.96, Page 16).

Morphing software will get its own spot in the limelight this year. The Valis Group will introduce Version 2.0 of Metaflo' and Movieflo', and MetaTools Inc. will give a preview of Kai's Power Goo.

On the multimedia authoring front, Macromedia Inc. will debut Version 3.5 of Authorware (see story, Page 12). Meanwhile, mFactory Inc. will announce a new partnership with Avid. The resulting product, dubbed the Avid Interactive Media Studio, will bundle mFactory's mTropolis multimedia authoring tool with video-editing technology from Avid.

Making its first foray into serious video editing is Strata Inc., which has acquired Avid's VideoShop software (see story, Page 12).

NAB will see new developments in high-speed data transfer. Vendors such as Transoft Corp., Pathlight Technology Inc. and Microtech International Inc. will demonstrate PCI cards and drives using Fibre Channel-Arbitrated Loop (FC-AL) and Serial Storage Architecture (SSA) technology.

MicroNet Technology Inc. will take the wraps off its DataDock 7000 RAID system. □

Apple puts Finder onto HTML pages

By Joanna Pearlstein

Putting the face of the Mac OS onto the Internet, Apple this month unveiled WebFinder, a Finder-like tool for serving documents on the Web, and new versions of MacPPP and AppleSearch Server.

WebFinder, an ACGI (Asynchronous Common Gateway Interface), displays file directories in Web pages that resemble the Finder. The program displays the file's icon, and users can sort items by Name, Size, Kind and Date Last Modified.

When a user clicks on a text file in the directory, WebFinder converts it into HTML on the fly, maintaining all styles, Apple said. Clicking on an Adobe Acrobat file launches the Acrobat plug-in, if available.

WebFinder's access privileges are set through Apple file sharing.

John Dasher, engineering manager for Apple's CyberTech Internet programming group, said his team designed the tool "as a complement to FTP. FTP was a little too complex for some users, and we said, 'Gosh, there's got to be an easier way.' "

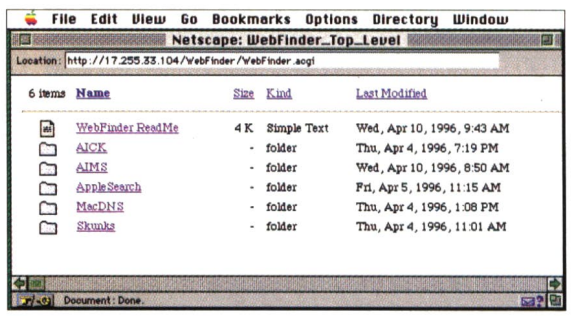
WebFinder is currently running on Apple's Cybertech Web site at http://cybertech.apple.com. The tool is expected to be available free in the near future.

In other news, Apple last week shipped MacPPP 2.5, an update to the tool used for a Point-to-Point Protocol (PPP) connection. The new version is compatible with Open Transport and offers improved virtual-memory support, better serial-port management on PowerBooks and several bug fixes. The new tool is included in Version 1.1 of the Apple Internet Connection Kit and is available on Apple's Web servers.

MacPPP is free, but Apple supports it only for owners of the $49 Apple Internet Connection Kit.

Finally, Apple has released a patch for the AppleSearch Server, which enables Wide Area Information Server functionality with Open Transport; the Version 1.5.1 update is required only for Open Transport users.

Both MacPPP 2.5 and the AppleSearch Server 1.5.1 Patch are available on the CyberTech site. □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Location: http://17.255.33.104/WebFinder/WebFinder.acgi
6 items Name Size Kind Last Modified
WebFinder ReadMe 4 K Simple Text Wed, Apr 10, 1996, 9:43 AM
AICK - folder Thu, Apr 4, 1996, 7:19 PM
AIMS - folder Wed, Apr 10, 1996, 8:50 AM
AppleSearch - folder Fri, Apr 5, 1996, 11:15 AM
MacDNS - folder Thu, Apr 4, 1996, 1:08 PM
Skunks - folder Thu, Apr 4, 1996, 11:01 AM
Document: Done.

Look familiar? WebFinder offers a Finder-like view on file directories accessible through the Web.

Denali

From Page 1

The version to be shown at the conference will be able to integrate IBM's System Object Model (SOM) components. SOM, which underlies OpenDoc, lets object-oriented code from different development systems exchange data and instructions. The final version of Denali is expected to have full SOM and OpenDoc functionality.

The version Armonk, N.Y.-based IBM is developing for Microsoft Windows, called VisualAge Basic, is in beta and will reportedly ship this summer. "IBM has really focused on making this as Visual Basic-like as possible," said a source close to IBM.

Apple has similar plans for Denali. The tool will reportedly let users integrate the BASIC programming language with OpenDoc parts, similar to how Visual Basic developers use Microsoft Corp.'s Visual Basic extensions (VBXes). According to Apple, Denali will also be able to import and run Visual Basic applications; unlike the Windows version, however, Denali is not expected to support VBXes.

"This will be great for the Mac," said a third-party developer who was briefed on the project. "Because of the power and cross-platform capabilities of Denali, Visual Basic developers will be able to bring their applications to the Mac," he said. "This will plug the Visual Basic hole on the Mac quite nicely."

Denali is expected to come with database-access capabilities, including support for Open Database Connectivity middleware.

Sources said much of the technology that Apple and IBM have based Denali and VisualAge Basic on comes from Visual Edge Software Ltd., a software developer and distributor in St. Laurent, Quebec. Last year Apple and IBM announced that their upcoming Visual Basic-like programming tools will incorporate Visual Edge's Object Bridge, which provides interoperability between object models.

Apple declined to comment. □

Copland

From Page 1

utility that lets users choose from different window frames, menu styles and desktop patterns, Lowe assuaged the concerns of consultants and support workers in the audience. He said Copland will come with a standard workspace setting that will provide a uniform interface fallback for developers and site managers fielding technical support calls.

In the Copland Finder, Lowe showed animated sprites running in the background as an active desktop pattern and running in the foreground as a screen saver.

Lowe said Copland's human interface will be built on IBM Corp.'s System Object Model (SOM) and offer developers HI Objects, which define all elements of the interface. This architecture will eliminate the need for system patches, such as control panels and extensions, to tweak the Finder, as is the case with the current OS.

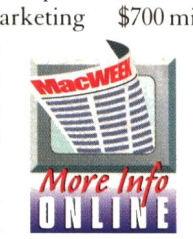
Similar to AppleSearch, the latest version of Copland's enhanced Find command displayed the results of text searches with bars indicating the relevancy of each file found. Lowe showed Copland finding text in a variety of documents, including QuickTime movies.

Calling Microsoft's preview program for Windows 95 "marketing genius," Lowe said Apple will also have a public beta release in the fall to shake out bugs and improve compatibility.

Lowe ran several current applications, including ClarisImpact 2.0 and Microsoft Excel 5.0; the Developer Release 0 version crashed several times, but that did not seem to bother the audience.

The rundown of the forthcoming Mac OS was a welcome addition to MacFest '96, where attendees, tired of wringing their hands about the Cupertino, Calif., company's dismal fiscal situation, were cheered by the presentation.

"Copland is the hottest topic for our members, aside from Apple's $700 million loss," said Fred Swan, chairman of BMUG's board and product manager at FWB Inc. of Menlo Park, Calif. "Everyone was impressed and looks forward to getting hold of it." □



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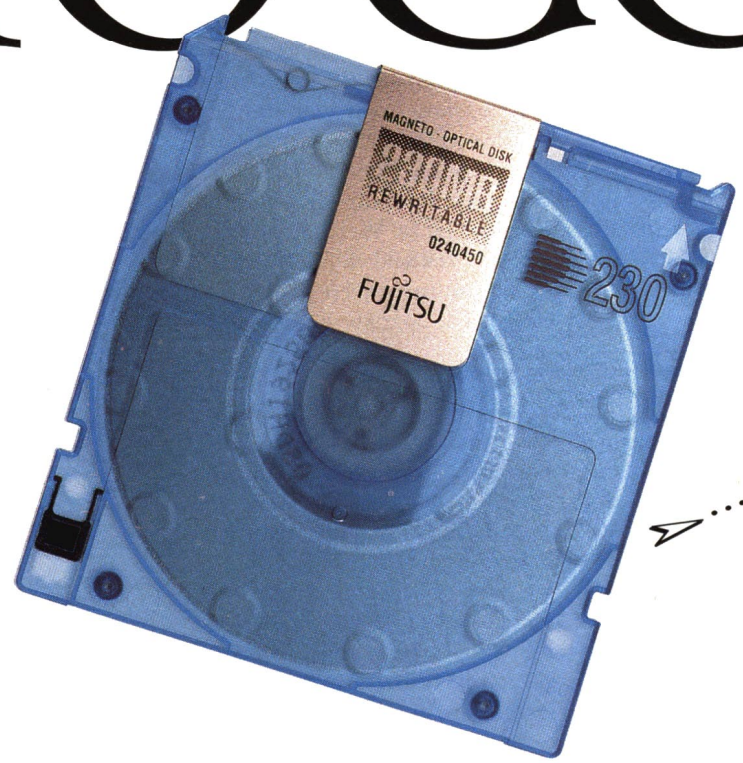

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Spyglass

From Page 1

Enhanced Mosaic, which Spyglass licenses to other software makers, is the core of several commercial Internet clients, including Microsoft Corp.'s Internet Explorer, Oracle Corp.'s Power Browser, InterCon Systems Corp.'s Internet Valet, Ventana Communications •Group's Enhanced Mosaic, Firefox Corp.'s NOV*IX, White Pine Software Inc.'s eXodus Plus and Verity Inc.'s Topic CD Publisher.

Spyglass will deploy the kit on Windows and Unix platforms through OLE, ActiveX and its own cross-platform API, rather than via OpenDoc.

Licensees that currently modify the code of Enhanced Mosaic to build custom Internet clients will be able to pick and choose the Web technologies they want to include. This freedom of choice will let them integrate Enhanced Mosaic more easily into custom applications, Spyglass said.

"We like what they've done," said Emerick Woods, vice president of Internet products at Spyglass licensee Quarterdeck Corp. of Marina del Rey, Calif. Woods said his company plans to use the new software to provide an OpenDoc-based version of Quarterdeck Mosaic for the Mac. The new incarnation of Enhanced Mosaic is "much more of a tool kit now. Before, it required intimate knowledge of the browser at the source-code level," he said.

Microsoft of Redmond, Wash., said it is considering the Spyglass kit for future versions of its browser.

Gina Centoni, Apple product line manager for OpenDoc, said Spyglass' announcement is "fantastic." She said the plans for Enhanced Mosaic demonstrate the momentum around OpenDoc and that component-based development is the future of software.

Hoping to get its OpenDoc kit into the hands of smaller companies and in-house developers, Spyglass announced a less-expensive licensing plan. Currently, developers must guarantee shipment of at least 10,000 browsers to qualify for an Enhanced Mosaic license. Starting this summer, Spyglass will license the kit for $25,000 to developers that plan to deploy the browser in 1,000-unit quantities.

Versions of the Mosaic kit will also be provided for noncomputer platforms, such as PDAs, kiosks, smart phones and consumer-electronic devices, Spyglass said.

Spyglass Inc. of Naperville, Ill., can be reached at (708) 505-1010; fax (708) 505-4944; http://www.spyglass.com/. □

WebStar

From Page 1

in May, when Quarterdeck releases WebStar 1.3, a free update that will deliver a new WebStar API (WSAPI). CGIs rewritten as WSAPI plug-ins will operate as subroutines inside the server's memory partition, eliminating the use of Apple-events scripts and greatly increasing speed.

Chuck Shotton, author of WebStar, said that WebStar plug-ins "not only will be able to mimic CGI calls but will be able to make WebStar calls, such as establishing their own TCP/IP connections and doing maintenance or statistical functions on the server and its logs."

Quarterdeck said WSAPI will be deployed in future versions of WebStar for Windows 95 and NT; the company will provide tools to help port WebStar plug-ins to servers that comply with Netscape Communications Corp.'s Netscape Server API (NSAPI) or Microsoft Corp.'s Internet Server API (ISAPI). Conversely, those tools will also let developers adapt NSAPI and ISAPI code to run on WebStar.

In June the company will ship Version 2.0 of WebStar, which Quarterdeck said will fulfill most of the feature requests it has received. The upgrade will improve server performance and administration tools while making security settings more flexible.

Quarterdeck said the administration interface will be completely revamped to make management easier and more powerful. Users will be able to administer servers and upload files from a Web browser.

Performance will be increased through improved file caching and a completely rewritten HTTP (Hypertext Transport Protocol) engine. A built-in image map parser and the HTTP Keep Alive function, which sends multiple files to the client via a single HTTP connection, will also be added.

Other features in Version 2.0 will include real-time monitoring and reporting of log statistics, SMTP (Simple Mail Transfer Protocol) messaging, and an automatic directory indexer that will provide a Finder-like view of the WebStar folder via a Web browser. Version 2.0 will serve Adobe Acrobat documents one page at a time. Its security realms will support TCP/IP addresses and domain names, and its log files will comply with the Common Log Format.

Sources said the company is also developing a BinHex plug-in that will translate files prior to delivery, track who downloads each file and assign access privileges accordingly.

Beyond Version 2.0, Quarterdeck will add to WebStar intelligent agents that collect data over the Internet and report the results automatically. The company said it also plans to work with browser developers to create super clients that will constantly monitor, collect and format Web data based on preferences set by the user.

Quarterdeck also plans to improve WebStar's integration with other Internet products, including the company's ListSTAR and WebCompass as well as with other companies' Internet servers.

Quarterdeck Corp. of Marina del Rey, Calif., can be reached at (310) 309-3700 or (800) 683-6696; fax (310) 309-4217; info@quarterdeck.com; http://www.quarterdeck.com. □

IBM

From Page 1

tronics Division in East Fishkill, N.Y., the part of the company that sells the PowerPC microprocessor.

IBM Microelectronics is expected to announce a contract with Apple that will allow IBM to sublicense the Mac OS to purchasers of its PowerPC chips. It will reportedly also announce deals with suppliers of other system components to round out the OS sublicensing options.

"We're hoping to partner with motherboard makers, parts suppliers, even systems integrators," one source within the division said.

IBM reportedly has no current plans to build Mac clones. The company is focusing on the PowerPC Platform, or PPCP, which will be able to run versions of the Mac OS, Windows NT, Novell NetWare, AIX and Solaris.

Industry observers noted that the Microelectronics Division sells most of its products to other IBM divisions, so the capability to sublicense the Mac OS could ease future bundling of Apple's OS with IBM-built PPCP machines.

"It's a toe in the door," said Pieter Hartsook, editor of the Hartsook Letter, a Macintosh industry newsletter based in Alameda, Calif. "Technically this makes good on the promise [IBM] made at Comdex." He added, however, that the expected deal is "a half-hearted endorsement of the platform."

Jim Turley, senior editor at Microprocessor Report of Sebastopol, Calif., said, "They want to peddle PowerPC chips." He also said the deal "won't change the outlook for the Macintosh and Macintosh-compatible market that much."

Motorola Inc. of Schaumburg, Ill., in February signed a Mac OS contract, which lets the company sublicense the OS to buyers of its PowerPC-based motherboards. Unlike Motorola, IBM Microelectronics will "target customers who are slightly further down the food chain — those who prefer to build their own motherboards," Turley said.

One of the largest builders of Intel-standard PC motherboards, Micronics Computers Inc. of Fremont, Calif., last month was negotiating an OEM agreement with IBM to build PowerPC motherboards. However, sources said, the deal collapsed because Micronics said IBM's demands were unreasonable.

IBM has reportedly pinned its hopes on the future builders of low-end PPCP boxes, especially members of the Taiwanese PowerPC Consortium. Sources said Big Blue does not want to compete directly with Motorola or existing builders of low-margin motherboards.

"The low end will be a dog fight," one source said. "Microelectronics doesn't want to start a logic-board business."

According to Turley, however, completed boards may be more attractive than raw chips and an OS. "It's so much easier for these screwdriver shops to buy a complete motherboard," he said.

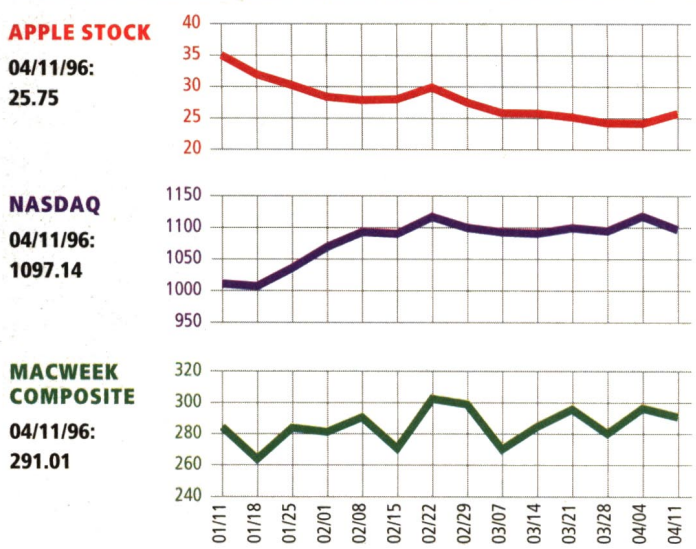
While IBM Microelectronics is positioning itself to supply a future PPCP market, some vendors are waiting for the PowerPC principals to generate demand.

"The PowerPC Consortium has no problem with sourcing, but on the marketing side we're not strong," said Richard Brown, communications manager at First International Computer Inc. of Taipei, Taiwan. "Apart from Acer [America Corp.], none of the companies is able to drive the market."

Apple and IBM declined to comment. □

Lisa DiCarlo of PC Week contributed to this report.

StockWatch



	04.11.96 CLOSE	WEEKLY CHANGE
Apple	25.75	1.63
MacWEEK Composite*	291.01	-5.63
SOFTWARE DEVELOPERS		
Adobe	32.75	0.25
Caere	9.38	0.63
CE Software	2.31	-0.31
Fractal	12.25	-0.25
Graphsoft	6.63	-0.13
Insignia	5.63	-0.38
Intuit	46.25	-0.75
Macromedia	42.13	-3.00
Microsoft	101.13	-3.25
Novell	13.13	-0.38
Oracle	43.88	-1.63
Symantec	13.00	0.88
STORAGE		
Conner	25.75	0.00
Iomega	31.94	-0.69
Pinnacle	7.88	-0.13
Quantum	18.75	0.25
Seagate	58.75	0.25
SyQuest	6.00	-0.31

	04.11.96 CLOSE	WEEKLY CHANGE
PERIPHERALS VENDORS		
AmeriQuest	0.88	0.06
Asanté	5.69	-0.56
Focus	2.25	0.00
Global Village	14.75	-0.13
HP	96.38	0.00
QMS	5.38	0.25
Radius	2.50	-0.06
Shiva	95.50	-3.00
Tektronix	32.88	-2.00
Truevision	8.00	0.00
DISTRIBUTORS		
CompUSA	57.25	1.75
IE	6.38	0.00
Merisel	2.63	0.00
Tech Data	17.50	0.50
INDUSTRY INDICATORS		
Compaq	39.63	2.00
IBM	117.50	-0.25
Intel	60.44	1.19
Motorola	55.50	3.63
SGI	24.63	-0.63
NASDAQ	1097.14	-21.07

**The MacWEEK Composite is calculated by adding the stock prices of the following companies: Apple, Adobe, Asanté, Caere, CE Software, Global Village, Intuit, Macromedia, Radius, Shiva, SyQuest and Truevision. Source: Nordby International Inc.*

On-line this week

ZDNet Is IBM selling out?

In his weekly on-line column "Off the Record," Mark Hall describes what the apparent IBM-Apple license deal means for Apple. Also, more on OpenDoc, Java and why they are made for each other. http://www.zdnet.com/macweek/mw_1015/opinion_otr.html.

The monthly results are in

Keep up-to-date on the hottest-selling Mac products according to ComputerWare, a chain of Mac-only resellers in California. A categorized list can be found on the MacWEEK Resource page. While you're there, check out the latest Navigator plug-ins and sign up for the MacWEEK Mailing List. http://www.zdnet.com/macweek/resources.html.

Where to find us on-line

On CompuServe, you'll find the MacWEEK Forum at go zmc:macweek and the free MacWEEK News menu at go zmc:mwnews. Visit our Web site at http://www.zdnet.com/macweek/.

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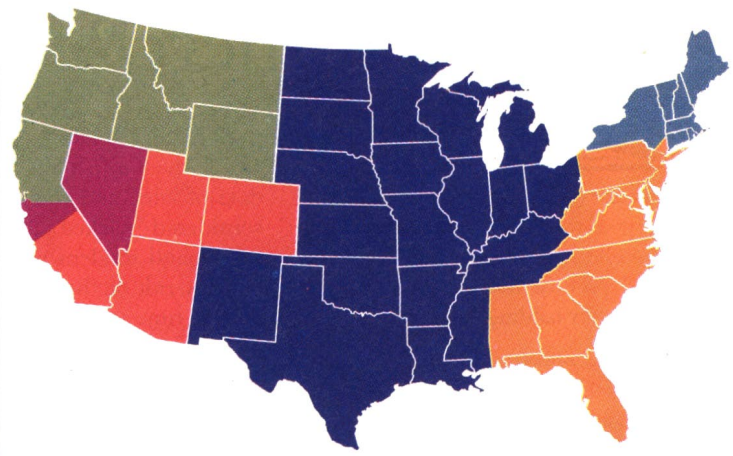

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À la recherche des Macs perdus

Face it: Mortality sucks. The industry is approaching the next millennium at the same blinding speed the Knife is swan-diving into dowdy middle age. Is it any wonder that the accelerated pace of modern times should make his rapidly balding pate spin?

As he rocks placidly on the front-porch swing, the Knife looks back fondly on the days of wine and roses, when a IIfx was considered "wicked fast" and a guy with a 9,600-baud modem could write his own ticket to ride on the digital frontier.

Alas, time and tide wait for no Mac: The Knife must report that those relentless go-getters at Power Computing are on the verge of upping the CPU ante with two new lines of Mac clones due April 29.

The first family, called PowerTower, will pack more speed than a Hell's Angels rally; the clones' 166- and 180-MHz PowerPC 604 chips will make them the fastest single-processor Macs on the market. Power's other CPUs, which may supplant the PowerWaves, will be called PowerCenter. They'll run 604 chips at a relatively poky 120, 132 and 150 MHz. The price should also be right for these high-octane clones: The Knife's speed freaks price a 120-MHz 604 PowerCenter with 8 Mbytes of RAM, an 850-Mbyte hard drive, a CD-ROM drive, a Level 2 cache and a keyboard at about two grand.

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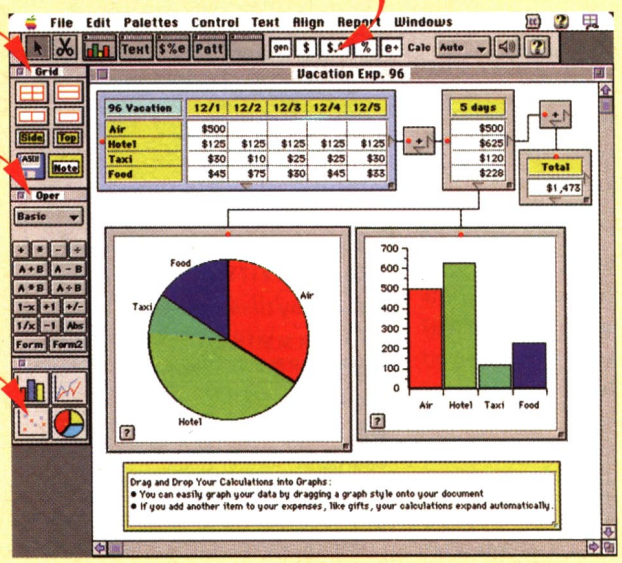

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Quasi-Moto

Besides pumping out powerhouse clones under its own moniker, those Power whippersnappers may also have a thing or two to tell their elders and betters at Motorola.

The grizzled PowerPC progenitor may know the RISC chip inside and out, but it has only a distant relationship with Macs. Therefore, in the wake of its Mac OS licensing deal, Motorola has turned to Power for some tips about building Power Mac clones.

Indeed, if the Knife's tap on Motorola's cell phones is to be believed, Moto is so taken with Power's youthful vigor that it is contemplating buying the company outright.

Amelio spoke in class today

Speaking of mingling with the kiddies: You won't be seeing Bob Dole at any Pearl Jam concerts this year, but Gil Amelio is proving to be far more receptive than Kansas' senator to brash new ideas. Apparently borrowing his nomenclature from perennial adolescent Bill Gates, Apple's chief medicine man spent much of last week with upper management and directors describing five or six "mega ideas" on how to fix the company.

Some of those new ideas may have been spawned during a recent tête-à-tête at Apple's campus between Dr. Gil and his old buddy, Gateway 2000 pooh-bah Ted Waitt. Neither of those worthies noticed the Knife (disguised as a decorative ficus) as Amelio took Waitt on a two-day tour of Apple. The monster PC cloner seemed receptive to Amelio's soft sell and took a special interest in the active-assistance portion of Copland.

Meanwhile, nine out of 10 sources agree Amelio will unveil new product and reorg plans to the Apple masses on April 22.

Back to the future

Among Dr. Gil's new moves will be the resurrection of two sexy vertical Mac boxes that tanked under earlier administrations. First, a recent visit to Apple's trash bins revealed new authorization for Spartacus, the high-concept "designer Mac" quashed by transient Bay Arean Michael Spindler. Reading between the coffee grounds, the Knife infers that this pricey appliance will fit in nicely with Amelio's plans for a tony MagLite CPU.

Digging even deeper into Apple's detritus, the Knife has uncovered new funding for a *very* ripe project code-named Davenport. This low-cost Internet box was axed by none other than current Live Picture potentate John Sculley during his tenure as Apple's big cheese. □

Got some dirt of your own to dish? Call the Knife at (415) 243-3544; fax (415) 243-3651; mac_the_knife@macweek.com.

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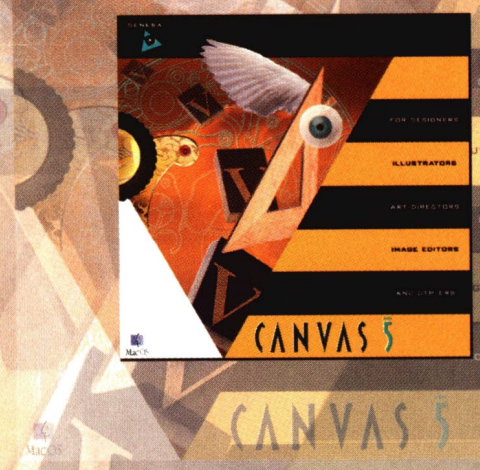

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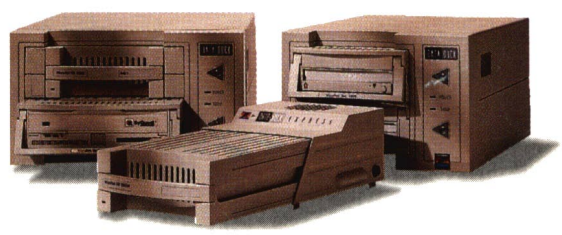

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